DOCUMENT RESUME

ED 400 344 TM 026 110

TITLE	Profile of Children in U.S. School Districts. Statistical Analysis Report.
INSTITUTION	Synectics for Management Decisions, Inc., Arlington, VA.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	ISBN-0-16-048782-X; NCES-96-831
PUB DATE	Sep 96
CONTRACT	RN-91-0600-01
NOTE	149p.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE	Statistical Data (110) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Census Figures; *Elementary School Students; Elementary Secondary Education; Enrollment; Ethnicity; Income; Institutional Characteristics; Interaction; Poverty; *Profiles; *Racial Differences; Rural Schools; *School Districts; *Secondary School Students; Socioeconomic Status; *Student Characteristics; Suburban Schools; Urban Schools

ABSTRACT

Examining the characteristics of school districts against the characteristics of 55.3 million "school-age children" (3- to 17-years-old) plus 18- and 19-year-olds who had not graduated from college) provides important insights into observed interrelationships. This report describes ways in which the characteristics of the children, such as household income, poverty status, and racial and ethnic composition, vary across school districts of different types. Individual, parental, and household characteristics of American school children are described and compared in several areas. Relationships among student and school district characteristics are presented through text, statistical tables, and graphs using material based on the "School District Analysis Book" (SDAB) developed largely from Census figures in response to a Congressional mandate. Demographic and enrollment profiles of the students and profiles of the districts are presented. Of the 48 million children aged 5 to 19 years in the United States, 91% were enrolled in school below the college level. Three appendixes present concepts and definitions, information on SDAB sources and data quality, and a report on the accuracy of SDAB data. (Contains 72 figures, 2 appendix figures, 17 tables, and 5 appendix tables.) (SLD)

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Statistical Analysis Report September 1996

PROFILE OF CHILDREN IN U.S. SCHOOL DISTRICTS

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Statistical Analysis Report September 1996

PROFILE OF CHILDREN IN U.S. SCHOOL DISTRICTS

U.S. Department of Education
Office of Educational Research and Improvement NCES 96-831

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Sharon P. Robinson
Assistant Secretary

National Center for Education Statistics
Pascal D. Forgione, Jr.
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September 1996

Suggested Citation

U.S. Department of Education. National Center for Education Statistics. *Profile of Children in U.S. School Districts*, NCES 96-831. Washington, DC: 1996.

Contact:
Samuel Peng
(202) 219–1643

Prepared for the National Center of Education Statistics by the staff of Synectics for Management Decisions, Inc. under Contract Number RN-91-0600.01.

Acknowledgments

This report is testimony to the vision, enthusiasm, and leadership of Roger Herriott, former Associate Commissioner for Statistical Standards and Methodology, NCES, who died suddenly during the early preparation stages. His contributions began with his overall guidance and support to the School District Mapping Project which provided a bridge between the results of the 1990 Census and the nearly 15,000 School Districts throughout the United States. It was his inspiration that led to the subsequent development of the School District Data Book (SDDB) CD-ROMs. The next step, in collaboration with Marilyn McMillan, a Senior Technical Advisor, NCES, was the design of an analytic tool, the School District Analysis Book (SDAB), from which the data for this report were developed. Finally, he conceptualized the report and initiated the planning and development which has led to this point. Simply put, this valuable, new data source owes its existence to his imagination and his efforts on its behalf.

Grateful thanks are extended to all of those who contributed time, knowledge, and efforts to this report. In this connection, Sam Peng deserves special mention for assuming responsibility for the report after the death of Roger Herriott and shepherding it to publication.

Among Synectics staff, principal thanks goes to Bob Parke and Meyer Zitter, who oversaw the writing of the report, coordinating the material, resolving differences, and reacting to NCES comments. Special mention goes to James Cochrane for creating the cross-tabulations. Michael Chang created the figures, David Monaco created the maps, Elizabeth Walter and Rita Bureika edited. Dhiren Ghosh of Synectics and Robert Burton of NCES worked to settle issues of sampling error and design effect. Robert Lehnen, Glynn Ligon, and Roy Pearson were the content consultants for, respectively, school finance, children at risk, and preschool and public versus private enrollment. Ann Costello and Elizabeth Ashburn edited the material. Warren Glimpse provided details about the preparation of the School District Data Book.

Sue Ahmed, Chief Statistician of NCES, Statistical Standards and Services Group, chaired the adjudication committee. This report also received extensive review by individuals within and outside the Department of Education: from NCES, Robert Burton and Mike Cohen, Statistical Standards and Services Group; Edith McArthur, Data Development and Longitudinal Studies Group; and William Fowler, Kerry Gruber, and John Sietsema, Surveys and Cooperative Systems Group; from the Office of Bilingual Education and Minority Languages Affairs, Milagros Lanauze; from the Bureau of the Census, Paul Siegel; from the Educational Research Service, Nancy Protheroe; from Westat, Inc., Daniel Levine; and from the Education Statistics Services Institute, Karol Krotki and Jon Cohen.

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-048782-X

Page

Acknowledgments iii

Chapter 1 Introduction ..... 1 - 1
Organization of the Report ..... 1 - 2
Highlights ..... 1 - 3
Enrollment Patterns of School-Age Children 5 to 19 Years Old ..... 1 - 3
Enrollment Patterns of School-Age Youth 14 to 19 Years Old (i.e., Teenagers) ..... 1 - 4
Enrollment Patterns of Children at Risk ..... 1 - 5
Enrollment Patterns of Children 3 to 4 Years Old (i.e., Prekindergarten-Age) 1 - 5
Private School Enrollment Patterns of Children 5 to 17 Years Old ..... 1 - 6
Population and Enrollment Characteristics of School-Age Children in School Districts ..... 1 - 7
Availability of Public Prekindergarten Programs in School Districts ..... 1 - 8
Distribution of Per Pupil Instructional Expenditure in School Districts ..... 1 - 9

Chapter 2 Demographic Profile of American Youth ..... 2 - 1
Age and Sex ..... 2 - 1
Race and Ethnicity ..... 2 - 4
Family Structure and Living Arrangements ..... 2 - 7
Income, Poverty, and Public Assistance ..... 2 - 8
Other Characteristics ..... 2 -10

Chapter 3 Enrollment Patterns by Status of Children ..... 3 - 1
Enrollment Patterns of School-Age Children 5 to 19 Years Old, by Selected Characteristics ..... 3 - 4
Enrollment Patterns by Living Arrangements ..... 3 - 6
Enrollment Patterns by the Relationship to Household Head ..... 3 - 7
Enrollment Patterns by Subfamilies ..... 3 - 8
Enrollment Patterns by Parents' Education ..... 3 - 9
Enrollment Patterns by Income and Poverty Level ..... 3 -10
Enrollment Patterns by Housing Type ..... 3 -11
Enrollment Patterns by Family Mobility ..... 3 -13
Enrollment Patterns by Race and Ethnicity ..... 3 -14
Enrollment Patterns by Linguistic Isolation of Household ..... 3 -15
Enrollment Patterns among All School-Age 14- to 19-Year-Olds ..... 3 -17

Enrollment Patterns of Children at Risk ..... 3 -19
Enrollment Patterns of 4- and 5-Year-Old Children at Risk by Language ..... 3 -21
Enrollment Patterns of Children at Risk by Status of Mother ..... 3 -22
Enrollment Patterns of Children at Risk by Race and Ethnicity ..... 3 -23
Enrollment Patterns of Children at Risk in Public Prekindergarten ..... 3 -25

Enrollment Patterns of School-Age Children 3 and 4 Years Old (i.e., Prekindergarten-Age) . 3 -26
Enrollment in Prekindergarten by Race and Ethnicity ..... 3 -27
Enrollment in Prekindergarten by Mother's Current Age ..... 3 -28
Enrollment in Prekindergarten by Parents' Education ..... 3 -29
Enrollment in Prekindergarten for Children of Single Parents ..... 3 -29
Enrollment in Prekindergarten by Race and Ethnicity and Relationship to Household Head ..... 3 -30
Enrollment in Prekindergarten by Family Mobility ..... 3 -31
Enrollment in Prekindergarten by Family Income ..... 3 -32
Enrollment in Prekindergarten by Family Income and Race ..... 3 -33
Enrollment in Prekindergarten by Poverty Status and Race and Ethnicity ..... 3 -34
Enrollment in Prekindergarten by Mother's Language Status ..... 3 -35

Private School Enrollment Patterns ..... 3 -36
Private School Enrollment by Grade Level and Sex ..... 3 -38
Private School Enrollment by Race and Ethnicity ..... 3 -39
Private School Enrollment by Relationship to Household Head and Race and Ethnicity ..... 3 -40
Private School Enrollment by Child's Place of Birth ..... 3 -42
Private School Enrollment by Home-ownership Status of Parents ..... 3 -42
Private School Enrollment by Mother's Current Age ..... 3 -42
Private School Enrollment by Mother's Ability to Speak English ..... 3 -43
Private School Enrollment by Parents' Education and Race and Ethnicity ..... 3 -44
Private School Enrollment by Family Income ..... 3 -46
Private School Enrollment by Family Mobility ..... 3 -47
Private School Enrollment by Household Location ..... 3 -48

Chapter 4 School District Profile ..... 4 - 1
General Characteristics of School Districts ..... 4 - 2
Characteristics of Minority-Predominant School Districts ..... 4 - 5
Other Characteristics of School Districts ..... 4 - 7

Prekindergarten Enrollment by School District Characteristics ..... 4 - 8
Prekindergarten Enrollment by Size of School District ..... 4 - 9
Prekindergarten Enrollment by Community Type ..... 4 -10
Prekindergarten Enrollment by District Family Income ..... 4 -11
Prekindergarten Enrollment by District Incidence of Poverty ..... 4 -12
Prekindergarten Enrollment by Family Structure ..... 4 -13

Public Prekindergarten Availability and School District Characteristics ..... 4 -14
Public Prekindergarten Availability by Size and Community Type ..... 4 -15
Public Prekindergarten Availability by District Family Income ..... 4 -16
Public Prekindergarten Availability by Unemployment and Poverty ..... 4 -17
Public Prekindergarten Availability by District Minority Populations ..... 4 -18

Private School Enrollment Rates by School District Characteristics: Using the SDAB ..... 4 -19

School District Characteristics and Higher Private School Enrollment ..... 4 -23

Instructional Expenditure Profile ..... 4 -26
- Distribution of School-Age Children by Average Per Pupil Instructional Expenditure of the School District ..... 4 -27
- Estimated Average Per Pupil Instructional Expenditure Rate by State ..... 4 -28
- Average Per Pupil Instructional Expenditure by District Size ..... 4 -31
- Average Per Pupil Instructional Expenditure by Community Type ..... 4 -32
- Average Per Pupil Instructional Expenditure by District Dropout Rate ..... 4 -33
- Average Per Pupil Instructional Expenditure by Amount of Federal Transfer Payments to Districts ..... 4 -34
- Average Per Pupil Instructional Expenditure by District Minority Population ..... 4 -35
- Average Per Pupil Instructional Expenditure by District Household Income ..... 4 -36
- Average Per Pupil Instructional Expenditure by District Incidence of Poverty ..... 4 -37

Appendix A. Concepts and Definitions ..... A - 1

Appendix B. SDAB: Data Sources and Data Quality Limitations ..... B - 1

Appendix C. SDAB: Accuracy of Data ..... C - 1

List of Figures

Figure 2-1 Males per 100 females among school-age children: 1990 ..... 2 - 2
Figure 2-2 18- and 19-year-olds by graduation status and by sex: 1990 ..... 2 - 3
Figure 2-3 Population distribution, by race and ethnicity: 1990 ..... 2 - 4
Figure 2-4 High school graduation status of 18-19-year-olds, by race and ethnicity: 1990 ..... 2 - 5
Figure 2-5 Distribution of white and minority 18- and 19-year-olds: 1990 ..... 2 - 6
Figure 2-6 Distribution of school-age children, by household type: 1990 ..... 2 - 7
Figure 2-7 Distribution of school-age children, by family income: 1990 ..... 2 - 8
Figure 2-8 Percentage of school-age children in poverty: 1990 ..... 2 - 9
Figure 2-9 Percentage of school-age children receiving public assistance: 1990 ..... 2 - 9

Figure 3-1 Percentage of school-age children enrolled in elementary and secondary school, by age: 1990 ..... 3 - 4
Figure 3-2 Schooling status of 14- to 19-year-olds: 1990 ..... 3 - 5
Figure 3-3 Enrollment patterns by living arrangements by age: 1990 ..... 3 - 6
Figure 3-4 Percent of enrolled 5- to 19-year-olds, by relationship to household head: 1990 ..... 3 - 7
Figure 3-5a Enrolled subfamily parents up to 19 years old, by subfamily type: 1990 ..... 3 - 8
Figure 3-5b Enrolled subfamily children 5 to 19 years old, by subfamily type: 1990 ..... 3 - 8
Figure 3-6 Enrolled 5- to 19-year-olds, by educational attainment of parent(s) with whom the child lives: 1990 ..... 3 - 9
Figure 3-7 Enrolled 5- to 19-year-olds, by family income: 1990 ..... 3 -10
Figure 3-8 Enrolled 5- to 19-year-olds by household ownership status: 1990 ..... 3 -11
Figure 3-9 Enrolled 14- to 19-year-olds, by household home-ownership status: 1990 ..... 3 -12
Figure 3-10 Distribution of enrolled and not enrolled 5- to 19-year-olds, by mobility: 1990 ..... 3 -13
Figure 3-11 Percentage of children enrolled by race/ethnicity and age group: 1990 ..... 3 -14
Figure 3-12 Enrolled 5- to 13-year-olds, by linguistic isolation: 1990 ..... 3 -15
Figure 3-13 Enrolled 14- to 19-year-olds, by linguistic isolation: 1990 ..... 3 -16
Figure 3-14 14- to 19-year-olds, enrolled and not enrolled: 1990 ..... 3 -18
Figure 3-15 Percent of 4- to 5-year-old at-risk children whose mothers spoke a language other than English, by race and ethnicity: 1990 ..... 3 -21
Figure 3-16 Enrolled at-risk children: 1990 ..... 3 -22
Figure 3-17 Enrolled at-risk 6- to 19-year-olds, by race and ethnicity: 1990 ..... 3 -23
Figure 3-18 Enrolled at-risk 4- to 5-year-olds, by race and ethnicity: 1990 ..... 3 -24
Figure 3-19 Percentages of 3- to 4-year-olds enrolled in prekindergarten: 1990 ..... 3 -26
Figure 3-20 Variations in prekindergarten enrollment rates, by race and ethnicity: 1990 ..... 3 -27
Figure 3-21 Enrolled prekindergarten children, by current age of mother in household: 1990 ..... 3 -28
Figure 3-22 Prekindergarten enrollment, by relation to household head and race and ethnicity: 1990 ..... 3 -30
Figure 3-23 Prekindergarten enrollment, by length of residence in home: 1990 ..... 3 -31
Figure 3-24 Prekindergarten enrollment, by family income: 1990 ..... 3 -32

Figure 3-25 Prekindergarten enrollment rates, by race and poverty: 1990 ..... 3 -34
Figure 3-26 Prekindergarten enrollment rate for children of mothers whose primary language is not English: 1990 ..... 3 -35
Figure 3-27 Private school enrollment of 5- to 17-year-olds: 1990 ..... 3 -37
Figure 3-28 Enrollment of 5- to 17-year-olds in grades 1-4, 5-8, and 9-12 in public and private schools: 1990 ..... 3 -38
Figure 3-29 Percent enrolled in private school of all enrolled 5- to 17-year-olds, by race and ethnicity: 1990 ..... 3 -39
Figure 3-30 Percent enrolled in private school of all enrolled 5- to 17-year-olds in families, by relationship to guardian: 1990 ..... 3 -40
Figure 3-31 Percent enrolled in private school of all children in grades 1-4, by race and ethnicity and relationship to guardian: 1990 ..... 3 -41
Figure 3-32 Percent enrolled in private school of all enrolled 5- to 17-year-olds, by age of mother: 1990 ..... 3 -42
Figure 3-33 Percent enrolled in private school of all enrolled 5- to 17-year-olds, by English-speaking ability of their mothers: 1990 ..... 3 -43
Figure 3-34 Percent enrolled in private school of all enrolled 5- to 17-year-olds, by educational attainment of mother in the household: 1990 ..... 3 -44
Figure 3-35 Percent enrolled in private school of all enrolled 5- to 17-year-olds, by family income: 1990 ..... 3 -46
Figure 3-36 Percent enrolled in private school of all enrolled 5- to 17-year-olds, by year family moved into present home: 1990 ..... 3 -47
Figure 3-37 Distribution of 5- to 17-year-olds enrolled in public and private school, by area of residence: 1990 ..... 3 -48

Figure 4-1 Distribution of school districts by size of district and distribution of children by size of district: 1990 ..... 4 - 3
Figure 4-2 Distribution of school districts and of children, by type of community: 1990 ..... 4 - 4
Figure 4-3 Percentage of children living in minority-predominant school districts: 1990 ..... 4 - 5
Figure 4-4 Percentage of each race/ethnicity enrolled in public schools in minority-predominant school districts: 1990 ..... 4 - 6
Figure 4-5 Enrollment of 3- and 4-year-olds in prekindergarten by size of school districts: 1990 ..... 4 - 9
Figure 4-6 Higher prekindergarten enrollment rates in districts, with higher rates of two-parent families: 1990 ..... 4 -13
Figure 4-7 Percentage of school districts in each state offering public prekindergarten: 1990 ..... 4 -14
Figure 4-8 School districts with public prekindergarten, by size of school district: 1990 ..... 4 -15
Figure 4-9 School districts with public prekindergarten programs, by districts' median family income: 1990 ..... 4 -16
Figure 4-10 School districts with public prekindergarten, by poverty levels: 1990 ..... 4 -17

Figure 4-11 School districts with public prekindergarten programs, by minority school-age population: 1990 ..... 4 -18
Figure 4-12 Enrollment of 5- to 19-year-olds in private school, by percent of urban population in school district: 1990 ..... 4 -20
Figure 4-13 Enrollment of 5- to 19-year-olds in private school, by size of urban area: 1990 ..... 4 -20
Figure 4-14 Private school enrollment, by districts' minority percentage: 1990 ..... 4 -21
Figure 4-15 Enrollment of 5- to 19-year-olds in private school, by school district median family income: 1990 ..... 4 -22
Figure 4-16 Enrollment of 5- to 19-year-olds in private school, by percent of college educated parents in school district: 1990 ..... 4 -23
Figure 4-17 Distribution of school-age children, by districts' average per pupil instructional expenditure: 1990 ..... 4 -27
Figure 4-18 Estimated average per pupil instructional expenditure rate by state: 1990 ..... 4 -29
Figure 4-19 Average per pupil instructional expenditure, by school district size: 1990 ..... 4 -31
Figure 4-20 Average per pupil instructional expenditure, by community type: 1990 ..... 4 -32
Figure 4-21 Average per pupil instructional expenditure, by school district dropout rate: 1990 ..... 4 -33
Figure 4-22 Average per pupil instructional expenditure, by amount of federal transfer payments: 1990 ..... 4 -34
Figure 4-23 Average per pupil instructional expenditure, by percent of district minority population: 1990 ..... 4 -35
Figure 4-24 Average per pupil instructional expenditure, by districts' median household income: 1990 ..... 4 -36
Figure 4-25 Average per pupil instructional expenditure, by districts' percent in poverty: 1990 ..... 4 -37

Figure B-1 Relationship of data ..... B - 2
Figure B-2 Percent difference between average ppe in the SDAB (estimated) and the F-33 ..... B - 9

List of Tables

Table 2-1	Number of school-age children: 1990	2 - 1
Table 2-2	Selected characteristics of the families/households of school-age children: 1990	2 -10
Table 2-3	All children by age and social characteristics: United States 1990	2 -11
Table 3-1	Percent of children enrolled by age and social characteristics: United States 1990	3 - 2
Table 3-2	Children (0 to 19 years old) at risk, by age groups: 1990	3 -19
Table 3-3	Children (0 to 19 years old) at risk, by race and ethnicity: 1990	3 -20
Table 3-4	Preschool enrollment of at-risk 4- and 5-year-olds, by availability of public prekindergarten: 1990	3 -25
Table 3-5	Percent of 3- to 4-year-olds enrolled in prekindergarten, by parents' education: 1990	3 -29
Table 3-6	Prekindergarten participation rates of 3- to 4-year-olds by family income and race and ethnicity: 1990	3 -33
Table 3-7	Private schools by type and enrollments: 1990-91	3 -36
Table 3-8	Percent of children in grades 1 through 4 enrolled in private school, by education of parents with whom the child lives and by race: 1990	3 -45
Table 4-1	Type of school district and enrollment: 1990	4 - 2
Table 4-2	School district profiles: 1990	4 - 7
Table 4-3	Prekindergarten enrollment, by type of community: 1990	4 -10
Table 4-4	Prekindergarten enrollment, by districts' median household income: 1990	4 -11
Table 4-5	Prekindergarten enrollment, by districts' percent living below poverty threshold: 1990	4 -12
Table 4-6	Percent of students in grades 1-12 enrolled in private school, by school district characteristic: 1990	4 -24
Table B-1	Number of regular school districts in original source files versus the number of matched school districts used in SDAB calculations of average ppe, by state	B - 7
Table B-2	Average per pupil instructional expenditure (ppe), by state, for SDAB (estimated) and the 1990 F-33	B - 8
Table C-1	Standard error design factors	C - 2
Table C-2	Unadjusted standard error for estimated totals	C - 5
Table C-3	Unadjusted standard error in percentage points for estimated percentage	C - 5

Chapter 1. Introduction

This report presents a mosaic picture of American school children illuminated by the school districts in which they lived. Specifically, the characteristics of school districts were examined against the characteristics of school-age children to provide important insights into the observed interrelationships. For example, the report describes how the characteristics of the children—such as average household income, poverty status, and racial and ethnic composition—varied across school districts of varying types—such as those in large cities as against those in suburban locations, or those with large per pupil instructional expenditures as compared to those with small per pupil instructional expenditures. It also provides information about the children who were living within district boundaries. Individual, parental, and household characteristics of American school children are described and compared, as in the case of children attending private schools as against public schools.

These relationships are presented through the use of text, statistical tables, and graphs. The numbers in this report refer either to children or to school districts. Characteristics of households and parents, such as educational level and family income, were used to classify children and school districts.

The material in this report is based on the School District Analysis Book (SDAB), which was developed in response to a Congressional mandate,[1] requiring the National Center for Education Statistics (NCES) to report on the characteristics of school districts and school-age children. In a collaborative effort, NCES and the Census Bureau linked 1990 Census data on the characteristics of school-age children to maps of the school districts in which the children resided to create statistical summaries by districts. To this information, NCES and Census added data on the characteristics of and expenditures by school districts to classify the districts into various categories. State- and national-level data are presented in the SDAB to provide a comprehensive view of the approximately 15,000 school districts and of the children who lived in them. The data are easily accessible through the use of a PC and a CD-ROM reader. As a result, data which previously were accessible only on a large computer system are now readily and economically available to any school district, researcher, or local education official.

It is hoped that both this report and the SDAB will prove responsive to congressional needs by providing a rich statistical source to support comparative analysis and policy development on the national, state, and local level. Further, these resources should be of interest and useful to educators, administrators, researchers, and others concerned with the social, economic, and educational status of children and school districts.

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[1] General Education Provisions Act, Public Law 100-297.

Further information on the SDAB may be obtained from the National Center for Education Statistics.[2]

Organization of the Report

This report presents information about school-age children and school districts from three perspectives:

- demographic profile of school-age children,
- enrollment profile of school-age children, and
- school district profile.

"School-age children" are the 55.3 million children in the United States who were (as of the last decennial census, April 1, 1990) *3 to 17 years old plus the 18- and 19-year-olds who had not graduated from high school*. The report focuses on the following groups: children 3 and 4 years old, many of whom were enrolled in prekindergarten; children 5 to 13 years old, most of whom were enrolled in kindergarten through the eighth grade; and children 14 to 17 years old, most of whom were enrolled in high school. The population also includes non-high school graduate 18- and 19-year-olds, as mentioned above.

In addition to data on school-age children, this report presents data on the 14,897 school districts in which they lived. In this report, a school district is an education agency or administrative unit that operates under a public board of education and is recognized by state education authorities. This report *excluded* about 1,300 nonregular school districts (supervisory units and regional, state, and federal administrative units); it also *excluded* a few regular school districts for which maps were not available. (See appendix B, SDAB: Data Sources and Data Quality Limitations for information about maps.)

Throughout the report, references to the SDAB tabulation numbers enable readers to explore the national-level relationships provided here for their own states. However, it must be said that some apparent paradoxes emerge in the report, such as that minorities were less likely to enroll in private schools, but high minority districts had higher private school enrollment, which may require more detailed examination. We have chosen not to speculate on the possible reasons for these paradoxes because the SDAB data base is a simplistic expression of the data—simple 1- or 2-way classifications—and cannot support all of the analysis that might be desired.

Chapter 2 describes demographic characteristics of the total population of school-age children, including age, sex, race and ethnicity, family structure, and other population characteristics derived from the 1990 Census.

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[2] To obtain a copy of the SDAB, contact the National Data Resource Center. Tel: (703) 845-3151; Fax: (703) 820-7465; Internet account ndrc@pcci.com.

Chapter 3 addresses the characteristics of school-age children, comparing those who are enrolled with those who are not enrolled, both in public and private schools.

Chapter 4 describes school districts according to their administrative, financial, social, and demographic characteristics.

This report also has three appendices. Appendix A, Concepts and Definitions, provides detailed definitions related to the SDAB data. Appendix B, SDAB: Data Sources and Data Quality Limitations, describes the SDAB sources—the Census Mapping Project and the 1990 Decennial Census—and their development into the 1990 Census School District Special Tabulation. It explains that some additional administrative data from the 1990 NCES Common Core of Data and financial data from the 1990 Census of Governments School District Finance data were used to classify school districts. It also explains certain limitations inherent in the SDAB data, and provides information on differences in average per pupil instructional expenditures between the SDAB and the F-33. Appendix C, SDAB: Accuracy of Data, demonstrates how to compute a standard error and the corresponding confidence interval of a proportion, a percentage, and a total, and to test hypotheses for the equality of two percentages.

Highlights

"School-age children" in this report and the SDAB are children in the United States who were (as of April 1, 1990) 3- to 17-year-olds plus those 18- and 19-year-olds who had not graduated from high school. Of the 55.3 million school-age children in this country, 7.3 million were prekindergarten age (3 to 4 years old), 32 million were elementary school age (5 to 13), and 16 million were high school age (14 to 19). (The SDAB population does not include the 4.7 million 18- and 19-year-olds who were high school graduates at the time of the 1990 Decennial Census.) Please note that in all tabulations (except as noted), the data for each race group excludes Hispanics, who were grouped separately. Therefore, "white," for example, stands for "white, non-Hispanic."

The following sections provide a summary of the highlights in the report.

Enrollment Patterns of School-Age Children 5 to 19 Years Old

- Of the 48 million school-age 5- to 19-year-olds in this country, 91 percent were enrolled in school below the college level. *(Ch. 3 Enrollment Patterns of School-Age Children 5 to 19 Years Old, by Selected Characteristics)*

- Among school-age 5- to 19-year-olds, 75 percent of the children enrolled in school and 67 percent of the children not enrolled in school lived in families headed by a married couple. *(Ch. 3 Enrollment Patterns by Living Arrangements)*

- Of school-age children 5 to 19 years old, roughly 5 percent (or 2,000,000) lived with their grandparents. Generally, children living with grandparents or other head-of-household relatives had somewhat lower enrollment rates than children living with birth, adopted, or stepparents. *(Ch. 3 Enrollment Patterns by the Relationship to Household Head)*

- Thirty percent of the school-age children of recent movers were not enrolled in school compared to 20 percent not enrolled among the school-age children of parents who had not recently moved. *(Ch. 3 Enrollment Patterns by Family Mobility)*

- Comparing enrollment status across racial and ethnic groups, among school-age 14- to 19-year-olds, Hispanics were less likely than other groups to be enrolled in school (80 percent enrolled compared to 90 percent for whites and 86 percent for blacks). The enrolled rate among 5- to 13-year-old children was similar across racial and ethnic groups—about 92 percent. *(Ch. 3 Enrollment Patterns by Race and Ethnicity)*

- School-age 14- to 19-year-olds who lived in linguistically isolated households (i.e., households where English was not spoken or was spoken very poorly) were less likely to be enrolled than teenagers in households where English was spoken as a matter of course (69 percent and 89 percent, respectively). *(Ch. 3 Enrollment Patterns by Linguistic Isolation of Household)*

Enrollment Patterns of School-Age Youth 14 to 19 Years Old (i.e., Teenagers)

For this report, "teenagers" include all 14- to 17-year-olds (13.1 million) plus the 18- and 19-year-olds who had *not* graduated from high school (2.9 million). Thus, among all 18- and 19-year-olds (7.6 million), only the 34 percent (approximately 1.3 million out of 3.7 million) of females who had not graduated from high school and the 43 percent (approximately 1.7 million out of 3.9 million) of males who had not graduated are included. [Taking a look at the race and ethnicity of the graduates, about two-thirds of white youth had graduated, compared to 53 percent of blacks and 44 percent of Hispanics.]

- Of the almost 16 million school-age 14- to 19-year-olds, about 1.8 million were not enrolled in school. Thirty percent of the not enrolled lived in families below the poverty level, 38.7 percent of the not enrolled did not live in two-parent families, and 21.4 percent of the not enrolled lived in the central city of a large metropolitan area. Thirty-seven percent of the not enrolled were black or Hispanic. *(Ch. 3 Enrollment Patterns among All School-Age 14- to 19-Year-Olds)*

- Of the 14.1 million 14- to 19-year-olds who were still enrolled in school, 14 percent lived in families below the poverty level, 26.4 percent did not live in two-parent families, and 15.1 percent of the enrolled lived in the central city of a large metropolitan area. Just over 25 percent of the enrolled were black or Hispanic. *(Ch. 3 Enrollment Patterns among All School-Age 14- to 19-Year-Olds)*

- Teenage groups with lower proportions of enrolled included married teenagers living with their parents, married teenagers living separately from their parents, those living in mobile homes (especially in rental units), institutionalized youth, teenagers who lived in linguistically isolated households (i.e., living in households where the primary language is not English and no adult spoke English "very well"), and those whose families had incomes below the poverty level. (The Bureau of the Census collected data about children where they lived; this included institutions, detention centers, etc.) *(Ch. 3 Enrollment Patterns of*

School-Age Children 5 to 19 Years Old, by Selected Characteristics; Enrollment Patterns by Living Arrangements; Enrollment Patterns by Subfamilies; Enrollment Patterns by Income and Poverty Level; Enrollment Patterns by Housing Type)

- Two groups of teenagers with extremely low enrolled rates were those who were themselves heads of households or spouses, and those who had children and still lived in their own parents' home. Only 26 percent of these married couple subfamilies (couples living in their parents' home) were enrolled in school. *(Ch. 3 Enrollment Patterns by the Relationship to Household Head, Enrollment Patterns by Subfamilies)*

Enrollment Patterns of Children at Risk

At-risk children are defined in the SDAB as children 0 to 19 years old living with a female parent who is not a high school graduate, who is single, divorced, or separated, and who is below the 1989 poverty level (as of the last decennial census). *At-risk prekindergarten children* are those under 6 years of age. *At-risk school-age children* are 6 to 19 years old. Such children are regarded as being at high risk of educational failure.

- Among all children 0 to 19 years old, nearly 3.8 million (out of a total number of 71.3 million) were classified "at risk." In this group, 860,000 children were born to mothers under 20 years old. *(Ch. 3 Enrollment Patterns of Children at Risk)*

- Close to half of at-risk children were black. Just over one-fourth were white, and another one-fourth were Hispanic. *(Ch. 3 Enrollment Patterns of Children at Risk)*

- Forty-five percent of at-risk 4- to 5-year-olds were enrolled in school. *(Ch. 3 Enrollment Patterns of Children at Risk by Race and Ethnicity)*

- About half (52 percent) of the at-risk 4- to 5-year-olds lived in school districts that did not offer public prekindergarten programs. *(Ch. 3 Enrollment Patterns of Children at Risk in Public Prekindergarten)*

Enrollment Patterns of Children 3 to 4 Years Old (i.e., Prekindergarten-Age)

Children that were three and four years old are considered prekindergarten-age.

- Of the 7.3 million children 3 or 4 years old in the United States, about 2 million (29 percent) were enrolled in prekindergarten programs. Twice as many 4-year-olds were enrolled as 3-year-olds. *(Ch. 3 Enrollment Patterns of School-Age Children 3 and 4 Years Old and tabulation X01G01)*

- One-in-five Hispanic 3- and 4-year-old children were enrolled in prekindergarten; about one-in-three each of white, black, and Asian/Pacific Islander 3- and 4-year-old children were enrolled in prekindergarten. *(Ch. 3 Enrollment in Prekindergarten by Race and Ethnicity)*

- Prekindergarten-age children living with parents who had college degrees were about twice as likely to be enrolled in prekindergarten as those living with parents who did not have college degrees. *(Ch. 3 Enrollment in Prekindergarten by Parents' Education)*

- The percentage of 3- and 4-year-old children from female-headed families who participated in prekindergarten programs was only slightly lower than that for children living in married couple families (27 percent versus 30 percent). *(Ch. 3 Enrollment in Prekindergarten for Children of Single Parents)*

- The enrollment rate into prekindergarten programs for prekindergarten-age children from families with low annual incomes was about 23 percent compared to about 50 percent for high income families. *(Ch. 3 Enrollment in Prekindergarten by Family Income)*

- Forty-three percent of suburban school districts had high prekindergarten enrollment rates; that is, more than 40 percent of the 3- and 4-year-olds were enrolled in prekindergarten in 43 percent of suburban school districts. More than 40 percent of the 3- and 4-year-olds were enrolled in prekindergarten in 18 percent of country school districts, 12 percent of town school districts, and 15 percent of central city school districts. *(Ch. 4 Prekindergarten Enrollment by Community Type)*

- Generally, school districts with low median family incomes had low prekindergarten enrollment rates (i.e., less than 20 percent of the 3- and 4-year-olds were enrolled in prekindergarten), while high-income districts had higher prekindergarten enrollment rates (over 40 percent of the 3- and 4-year-olds were enrolled in prekindergarten). *(Ch. 4 Prekindergarten Enrollment by District Family Income)*

- School districts where two-parent families predominate tended to have higher prekindergarten enrollment rates. Among districts where most children were in two-parent families, about 40 percent of the children were in districts with prekindergarten enrollment rates of over 40 percent. *(Ch. 4 Prekindergarten Enrollment by Family Structure)*

Private School Enrollment Patterns of Children 5 to 17 Years Old[3]

- Ten percent of American children ages 5 through 17 were being educated in private schools. While private schools served children from all population groups, their students were more likely to reside in metropolitan areas, live in families with relatively high incomes, and live with parents who held college degrees. *(Ch. 3 Private School Enrollment Patterns, Private School Enrollment by Parents' Education and Race and Ethnicity, Private School Enrollment by Family Income, Private School Enrollment by Household Location, and Table 2-3)*

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[3] Private school enrollment of 3 and 4 year old children is not discussed in this report due to data quality limitations. See appendix B.

- Seventy-five percent of the 4.0 million 5- to 17-year-old students in private schools were in grades 1-8. *(Ch. 3 Private School Enrollment by Grade Level and Sex)*

- White and Asian populations enrolled in private schools at about the same rate, 13 percent. This level of participation was over twice as high as that of black children, while about 8 percent of enrolled Hispanics went to private schools. *(Ch. 3 Private School Enrollment by Race and Ethnicity)*

- Private school enrollment rates were greater for children living with parents who had higher levels of educational attainment. Children living with a mother or father who had a college degree were four times more likely to be enrolled in private school than children living with a mother or father who did not have a high school diploma (roughly 20 percent versus 5 percent). *(Ch. 3 Private School Enrollment by Parents' Education and Race and Ethnicity)*

- Children of recent movers (those who had moved within 15 months of the Census) were less likely to be enrolled in private school than children in families that had lived in their homes for longer periods. *(Ch. 3 Private School Enrollment by Family Mobility)*

- Families living in urban areas were twice as likely to send their children to private schools as were families living outside such areas. The higher the population per square mile, the higher were the private school enrollment rates. *(Ch. 4 Table 4-6)*

Population and Enrollment Characteristics of School-Age Children in School Districts

To connect information from different sources on school districts and children, the "relevant" populations of children were identified and assigned in the data base to a school district. The relevant population for a school district would be those children who lived in the school district and whose grade levels, estimated from Census data, were appropriate *for that school district.* For example, there were about 3,000 elementary school districts. Tabulations of the characteristics of children living in such districts excluded children in high school because they were not "relevant" to the elementary districts. Children in high school were "relevant" to the corresponding secondary school district or consolidated school district. The SDAB associated each child with only one school district to avoid double counting and problems with the interpretation of the data.

Data on the geographical characteristics of the school district were used to classify districts into several community types: *Urban School District,* a school district with 70 percent or more of its population residing in urban areas (urban school districts have three subcategories: central city, suburban, and areas that are urban but lie outside of an "urbanized" area); *Rural School District,* a school district with 30 percent or less of its population residing in urban areas (rural school districts have two subcategories: town and country); and *Mixed School District,* a school district with more than 30 percent but less than 70 percent of its population residing in urban areas.

There were about 15,000 regular school districts in the United States. Although the majority of school districts were located in rural areas, most children were enrolled in urban school districts. The 25 percent of school districts located in urban areas enrolled 68 percent of all school-age

children in 1990. In contrast, the 60 percent of school districts in rural areas enrolled 17 percent of school-age children. The 15 percent of school districts of mixed urban-rural character enrolled 16 percent of the school-age children.

- Sixty percent of all minority school-age children enrolled in public schools in 1990 were enrolled in minority-predominant districts. (Districts in which non-Hispanic whites made up less than 50 percent of the school-age population were classified as minority-predominant school districts.) Hispanic school-age children were more likely to be enrolled in such districts than were black school-age children (66 percent versus 56 percent). *(Ch. 4 Characteristics of Minority-Predominant School Districts)*

- In 9 percent of school districts (approximately 1,300), the combined minority populations made up over 50 percent of the total school-age population in 1990. *(Ch. 4 Characteristics of Minority-Predominant School Districts)*

- One-fourth of all school-age children enrolled in public schools lived in these minority-predominant school districts. *(Ch. 4 Characteristics of Minority-Predominant School Districts)*

- Black and Hispanic school-age children were about equally likely to be enrolled in the same race-ethnic predominant districts. That is, 29 percent of black school-age children were enrolled in districts where black children were in the majority; 31 percent of Hispanic school-age children were enrolled in districts where Hispanic students were in the majority. *(Ch. 4 Characteristics of Minority-Predominant School Districts)*

- There were about 1,200 school districts where the median family income was less than $20,000, and about the same number of districts where the median family income was over $50,000. *(Ch. 4 Other Characteristics of School Districts)*

Availability of Public Prekindergarten Programs in School Districts

- Nationally, about one-fourth of the nearly 15,000 school districts provided public prekindergarten programs. Seven states did not provide public prekindergarten programs in any of their school districts. *(Ch. 4 Public Prekindergarten Availability and School District Characteristics)*

- Large school districts (all of those with 10,000 students or more) were about two-and-a-half times more likely to provide public prekindergarten programs than small school districts (fewer than 1,000 students). About half of large school districts offered prekindergarten programs, compared to only 18 percent of smaller school districts. *(Ch. 4 Public Prekindergarten Availability by Size and Community Type)*

- The higher the median income of the school district, the more likely that the school district offered public prekindergarten programs. *(Ch. 4 Public Prekindergarten Availability by District Family Income)*

- In districts where minorities made up 70 percent or more of the school-age population, about one-third of the districts offered prekindergarten programs. Where minorities were under one percent of the total number of district students, only a seventh of the districts provided public prekindergarten opportunities. *(Ch. 4 Public Prekindergarten Availability by District Minority Populations)*

Distribution of Per Pupil Instructional Expenditure in School Districts

Data used to categorize school districts on the basis of average per pupil instructional expenditures in this report were based on expenditures information collected in the 1990 Survey of Local Government Finances, a component of the Census of Governments. In the development of the SDAB, all direct instructional expenses, including salaries and wages, retirement, and other personnel benefits, as well as direct expenditures for supplies and materials were included in the count of instructional expenditures. Nationally, instructional expenditures were around 58 percent of total school district current expenditures in fiscal year 1990. Per Pupil Instructional Expense did *not* include all of the components of *Total Expenditure per Pupil* which in addition to instructional expenses included expenses for support services, non-instructional expenses, capital outlays, payments to other governments, and interest payments on debt. Per Pupil Instructional Expenditure, therefore, *excluded* payments for such items as building construction, equipment purchases, utility charges, and salaries and benefits for administrative and non-certified personnel such as secretaries, food service employees and maintenance workers, bus drivers, and security officers. The estimates of average per pupil instructional expenditure for states presented in this report were based on numbers in the SDAB tabulations. See appendix B, SDAB: Data Sources and Data Quality Limitations, for a detailed explanation of how the estimates were calculated.

- The estimated average per pupil instructional expenditure was $2,893 as reported in 1990. *(Ch. 4 Estimated Average Per Pupil Instructional Expenditure Rate by State)*

- Estimated average instructional expenditures varied from a high of $4,924 per pupil in Connecticut to a low of $1,782 in Utah. Nine of the ten states with the highest per pupil instructional expenditures were in the New England or the Middle Atlantic regions. *(Ch. 4 Estimated Average Per Pupil Instructional Expenditure Rate by State)*

- Smaller school districts spent more per pupil than larger ones, except for the very largest districts (50,000 students or more). The greatest difference in average instructional expenditure occurred between districts with fewer than 150 students ($3,383) and districts with between 10,000 and 25,000 students ($2,643). *(Ch. 4 Average Per Pupil Instructional Expenditure by District Size)*

- Comparing expenditures by community type, suburban districts—in urbanized areas outside central cities—had the highest average expenditure ($3,110 per pupil), while districts categorized as urban, outside urbanized areas had the lowest average ($2,531). *(Ch. 4 Average Per Pupil Instructional Expenditure by Community Type)*

- School districts with lower dropout rates (less than 12 percent) tended to spend substantially more than the national average per pupil on instruction. *(Ch. 4 Average Per Pupil Instructional Expenditure by District Dropout Rate)*

- Districts receiving large Federal transfer payments had higher per pupil instructional expenditures, on average, than districts receiving small Federal payments. For example, in districts receiving $1,000 or more per pupil from the Federal government, the instructional expenditure average exceeded $4,000 per pupil, compared with the national average of $2,893. *(Ch. 4 Average Per Pupil Instructional Expenditure by Amount of Federal Transfer Payments to Districts)*

- The wealthiest school districts—those with median family incomes of $50,000 or more—spent on average 50 percent more on instruction than the poorest districts (those with median family incomes less than $25,000): $3,725 per pupil versus $2,427. *(Ch. 4 Average Per Pupil Instructional Expenditure by District Household Income)*

Chapter 2. Demographic Profile of American Youth

There were 55.3 million school-age children (defined as all 3- to 17-year-olds and those 18- and 19-year-olds who had not graduated from high school) as of April of 1990. A closer look at the age, sex, and race/ethnicity distributions, along with a consideration of family structure and living arrangements, family income, poverty, and public assistance status of those youth is essential to understanding the needs of school-age children and the changing demands that may be placed on the education system.

Age and Sex

Of the 55.3 million school-age children, about 32 million were elementary school age (5 to 13 years old). Half that many, about 16 million, were high school age (14 to 19 years old). The remainder, just over 7 million, were prekindergarten age (3 or 4 years old) (table 2-1).

Table 2-1. Number of school-age children: 1990

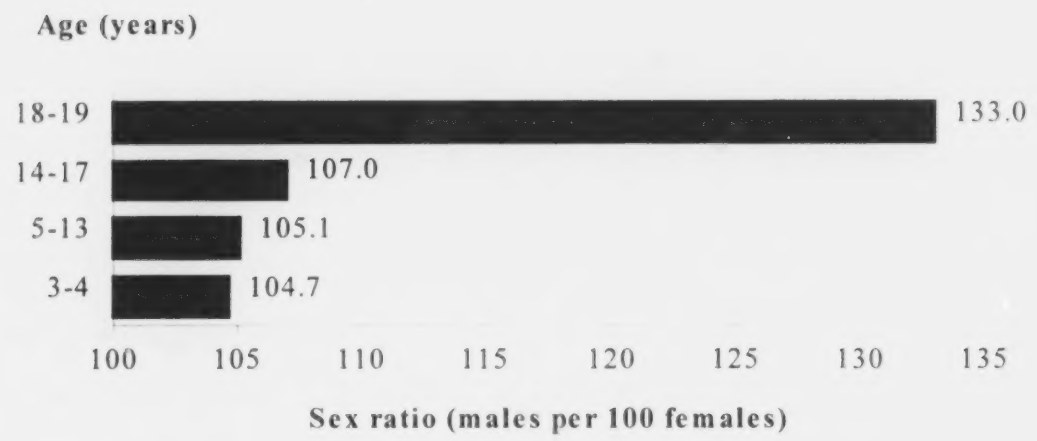
Age group	Number
Prekindergarten (3-4)	7,339,000
Elementary (5-13)	32,007,000
High school (14-19)	15,980,000
All 14-17*	13,060,000
18-19 non-high school graduates*	2,919,000
Total	55,326,000

* The 14- to 17-year-old age group includes approximately 260,000 youths who had graduated high school and who were included in the SDAB population. The total number of 18- and 19-year-olds was 7.6 million; 4.7 million had graduated from high school and were not included in the SDAB population.

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C03G.

Among the children ages 3 through 17 there were a few more boys than girls, reflecting the sex discrepancy evident at birth where there are 106 boys born for every 100 girls[1] (figure 2-1).

Figure 2-1. Males per 100 females among school-age children*: 1990



* Note: The 18 to19 ratio is so skewed because more 18- and 19-year-old girls than boys had graduated from high school. See figure 2-2.

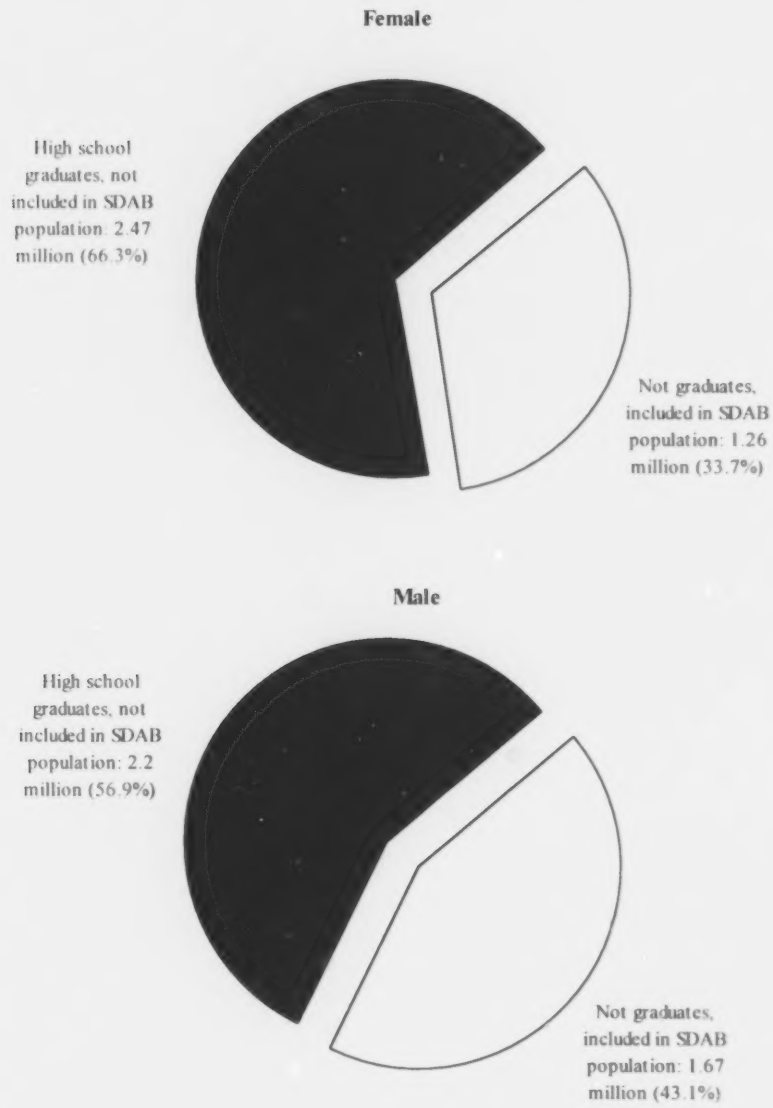
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C03G.

By the time these youths reached ages 18 and 19, a number of them had graduated from high school and left the ranks of the school-age population. This is more often the case for young women than young men. 1990 Census data show that two-thirds of the 18- and 19-year-old women had graduated from high school compared with a little over one-half of the men (figure 2-2). As a result, there were 33 additional males for every 100 females among the 18- and 19-year-olds who had not completed high school.

Although the majority of the school-age children were elementary aged or high schoolers ages 14 through 17, the varied experiences of young men and women ages 18 and 19 pointed to the potential need for programs targeted at different needs. One-third of the young women and nearly half of the young men ages 18 and 19 had not completed high school in 1990—for these young adults, efforts targeted at keeping them in school, or getting those who have dropped out back in school, were essential to helping these young adults acquire the skills they needed to make their way in contemporary American society. On the other hand, for the two-thirds of the young women and one-half of the young men in this age group who had completed high school, the focus should be on the transition to work or postsecondary education, or both.

[1] National Center for Health Statistics. *Vital Statistics of the United States*. Annual Reports.

Figure 2-2. 18- and 19-year-olds by graduation status and by sex: 1990

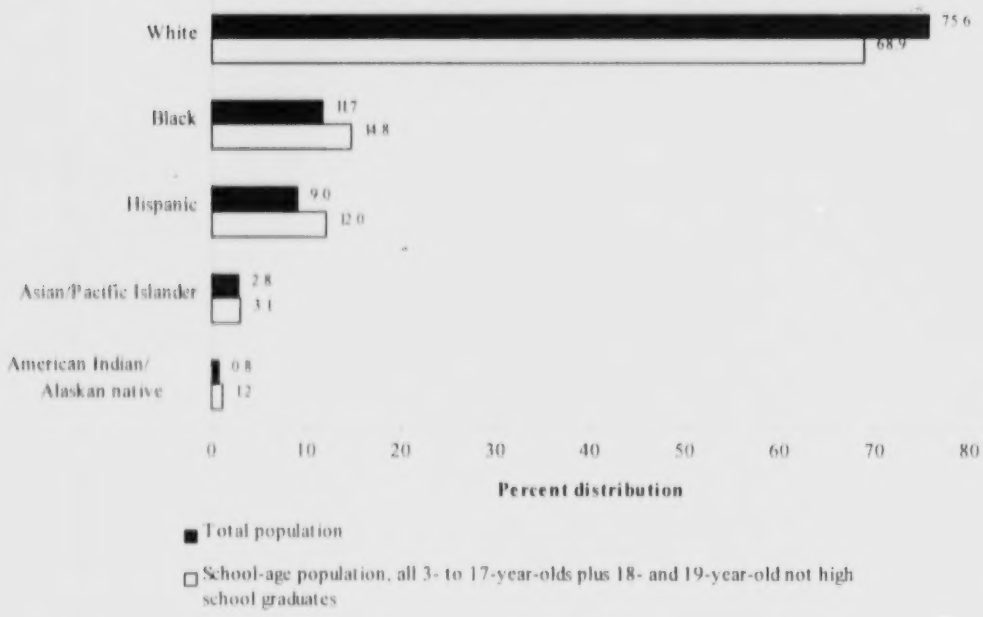

Female
High school graduates, not included in SDAB population: 2.47 million (66.3%)
Not graduates, included in SDAB population: 1.26 million (33.7%)
Male
High school graduates, not included in SDAB population: 2.2 million (56.9%)
Not graduates, included in SDAB population: 1.67 million (43.1%)

Source: U.S. Bureau of the Census, *1990 Census of Population: Education in the United States*, 1990 CP-3-4, Washington, DC, 1994.

Race and Ethnicity

Members of racial and ethnic minority groups comprised about a quarter of the total U.S. population (figure 2-3). Within the school-age population, the minority representation increased to nearly one-third. About 16 million youths were of racial or ethnic groups other than white. Nearly half of the minority youths were black, close to 40 percent were Hispanic, and 10 percent were Asian/Pacific Islanders. Minority populations tended to be younger than whites.

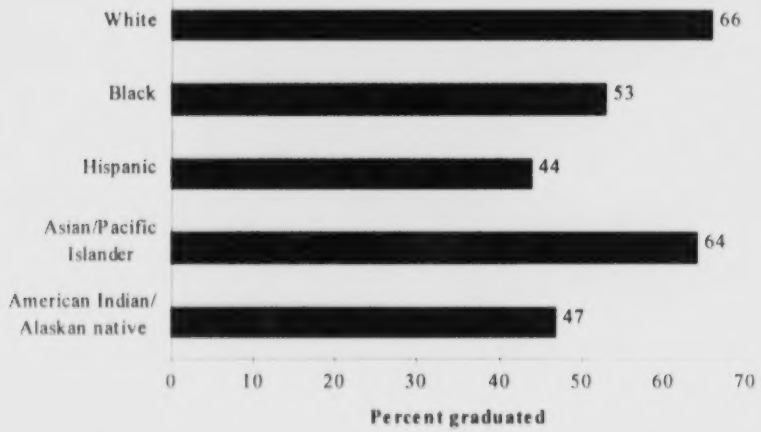
Figure 2-3. Population distribution, by race and ethnicity: 1990



Source: U.S. Bureau of the Census, *1990 Census of Population: Education in the United States*, 1990 CP-3-4, Washington, DC, 1994.

A number of these youths had special needs and might benefit from programs and services offered through their local schools. To followup on the experiences of the 18- and 19-year-olds, high school graduation rates show that the majority of the minority students (blacks, Hispanics, and native Americans) were not as likely to have completed school as their white and Asian/Pacific Islander peers (44-53 percent versus 64-66 percent—figure 2-4). As a result, the SDAB population was more heavily minority than the total population of 18- and 19-year-olds (figure 2-5). This suggests that efforts to encourage young adults to complete high school should include minority youths from immigrant families. In fact, 22 percent of the school-age population lived in language minority families and a number of these youths might be in need of bilingual education or ESL programs.

Figure 2-4. High school graduation status of 18-19-year-olds, by race and ethnicity: 1990



Source: U.S. Bureau of the Census, *1990 Census of Population: Education in the United States*, 1990 CP-3-4, Washington, DC, 1994.

Figure 2-5. Distribution of white and minority 18- and 19-year-olds: 1990

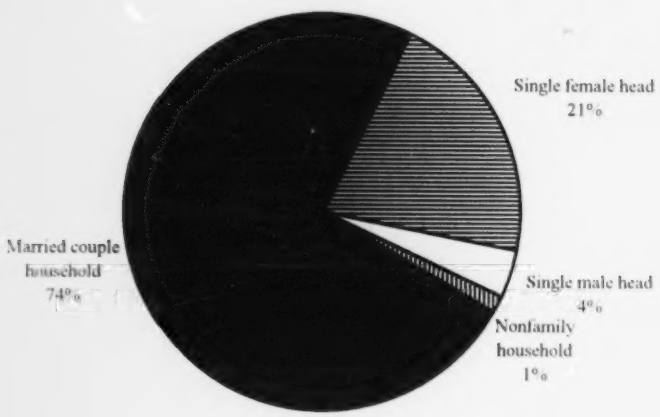
Distribution of 18- and 19-year-olds in SDAB population
White, non-Hispanic 54.5%
Minority 45.5%
Distribution of 18- and 19-year-olds in total population
White, non-Hispanic 70.5%
Minority 29.5%

Source: U.S. Bureau of the Census, *1990 Census of Population, Education in the United States*, 1990 CP-3-4, Washington, DC, 1994.

Family Structure and Living Arrangements

The type of family a child lived in, and in particular the number of adults in the family, was likely to affect the amount of adult supervision outside the immediate family that was needed, the time a child spent alone, and perhaps the emphasis on study time and school work. One quarter of school-age children lived in single parent households—the majority of these households (21 percent out of 25 percent) were headed by women (figure 2-6).

Figure 2-6. Distribution of school-age children, by household type: 1990



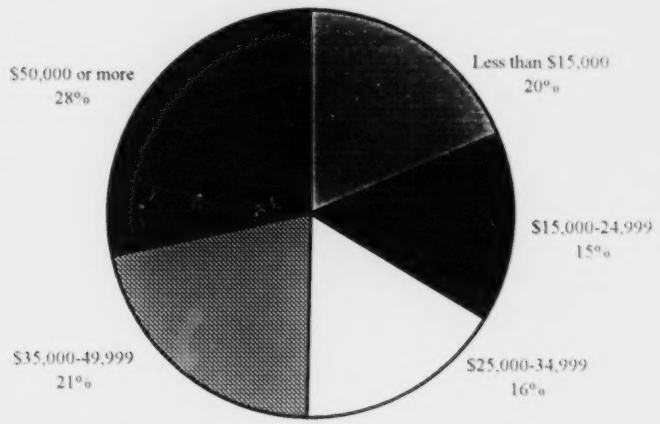
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H01G.

In addition to the children who lived in households, about 300,000 (0.5 percent) of all school-age children lived in a nonhousehold (group quarters) (Tabulation X01H02G). For those 14 and older, this was typically a juvenile or correctional institution; those under 14 were more typically at an emergency shelter or were homeless. Please note that the Bureau of the Census collected data about children where they lived—this included institutions, detention centers, etc.

Income, Poverty, and Public Assistance

More than 10 million children (20 percent of all school-age children) had families with incomes below $15,000 (figure 2-7). Another 8.4 million children (15 percent of school-age children) had families with incomes between $15,000 and $25,000.

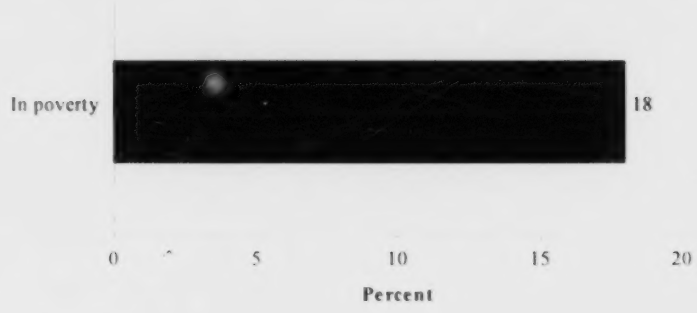
Figure 2-7. Distribution of school-age children, by family income: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference X01H12G.

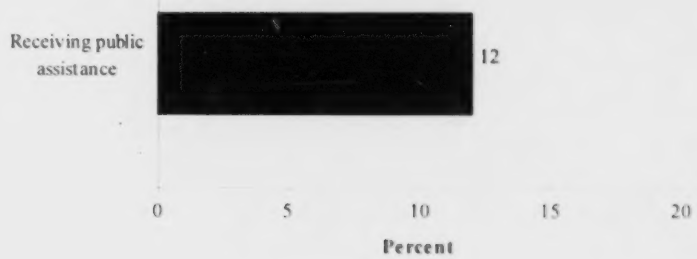
Poverty classifications take into account the income and number of people living in the household. (See appendix A.) About 9.9 million children—18 percent of school-age children—lived in poverty. About 6.5 million of school-age children—12 percent—lived in families receiving public assistance. (See figures 2-8 and 2-9.)

Figure 2-8. Percentage of school-age children in poverty: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H18G.

Figure 2-9. Percentage of school-age children receiving public assistance: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H15G.

Other Characteristics

There are several other measurable social and demographic factors that are part of each child's environment and have the potential for impacting the child's access to school, and ultimately, the child's ability to learn. For example, school-age children and their families can be described by such characteristics as parental education, mobility, type of community, and duration in present residence. A number of these distinguishing characteristics, applied to the school-age population overall, are listed in table 2-2. (See appendix A for definitions of these characteristics.)

Table 2-2. Selected characteristics of the families/households of school-age children: 1990

Characteristics	Percent of children
Language minority	22
Linguistically isolated household	4
Two-parent households where both parents in the household have college degrees and one-parent households where that parent has a college degree	12
One- or two-parent households where no parent in the household is a high school graduate	16
Central city residence	30
Rural residence	27
Renter	35
Recent mover (within 1-1/4 years of the 1990 Census)	22

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references X01H01G, X01H09G, X01P25G, X01H22G, X01H28G, and X01H29G.

Table 2-3 on the following pages is a more extensive look at all children by age and social characteristics.

Table 2-3. All children by age and social characteristics: United States 1990

(School-age children 3 to 19 years old. Numbers in thousands.[1])

Child characteristics	Total, 3-19 years	3-4 years	5-13 years	14-19 years
Total	55,326	7,339	32,007	15,980
Sex				
Male	28,562	3,754	16,400	8,409
Female	26,763	3,585	15,608	7,571
Race[2] and ethnicity				
White	38,131	5,054	22,190	10,888
Black	8,174	1,062	4,679	2,434
Hispanic	6,659	915	3,778	1,966
Asian or Pacific Islander	1,715	222	987	506
American Indian, Alaskan native	554	71	319	164
Language minority[3]				
Total	12,156	1,529	6,877	3,750
Linguistically isolated	2,275	376	1,458	442
Family income				
Less than $25,000	18,594	2,748	10,908	4,938
$25,000-$39,999	9,095	1,287	5,409	2,399
$40,000-$49,999	11,692	1,531	6,880	3,281
$50,000 and more	15,642	1,764	8,747	5,131
Poverty status				
In poverty	9,870	1,441	5,690	2,739
Not in poverty	44,569	5,777	25,779	13,012
Public assistance				
Receives public assistance	6,553	967	3,775	1,810
No public assistance	48,470	6,363	28,168	13,939
Household composition				
Married couple household	40,951	5,612	24,073	11,266
Single female head of household	11,300	1,389	6,435	3477
Single male head of household	2,289	281	1,222	786
Nonfamily household	483	49	214	220
Institutions and group quarters	303	9	64	230

(1) Details may not add up to total due to rounding.
(2) All race groups are non-Hispanic. Tabulation excludes other races, not shown separately.
(3) Language spoken at home is other than English.

Table 2-3. All children by age and social characteristics: United States 1990--Continued

(School-age children 3 to 19 years old. Numbers in thousands.[1])

Child characteristics	Total, 3-19 years	3-4 years	5-13 years	14-19 years
Parents' education				
Living in two-parent household:	39,037	5,346	23,202	10,489
Both parents college graduates	5,231	826	3,218	1,187
Neither parent high school diploma	3,934	451	2,204	1,281
All other	29,872	4,069	17,780	8,021
Living with mother only:				
College graduate	1,000	91	588	321
High school diploma only	5,231	493	2,065	973
No high school diploma	3,324	494	1,884	946
Length of residence in present home				
Less than 1-1/4 years (1989-1990)	11,977	2,142	7,000	2,837
From 1-1/4 to 5-1/4 years (1985-1988)	19,029	3,143	11,500	4,386
From 5-1/4 to 10-1/4 years (1980-1984)	10,408	1,314	6,430	2,664
More than 10-1/4 years (before 1980)	14,018	855	7,285	5,878
Tenure				
Owner	35,904	4,294	20,807	10,803
Renter	19,526	3,161	11,405	4,962
Residence				
Inside metropolitan area	42,174	5,805	24,466	11,903
Central city	16,539	2,367	9,503	4,669
Not central city	25,635	3,438	14,963	7,235
Urban	19,226	2,644	11,204	5,377
Rural	6,409	793	3,759	1,857
Outside metropolitan area	13,257	1,649	7,746	3,862
Urban	4,650	618	2,715	1,317
Rural	8,607	1,031	5,031	2,545
Rural nonfarm	14,130	1,735	8,278	4,118
Farm	906	93	524	289

(1) Details may not add up to total due to rounding.
(2) All race groups are non-Hispanic. Tabulation excludes other races, not shown separately.
(3) Language spoken at home is other than English.

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references: sex X01C03G, race X01C05G, language minority X01H08G and X01H09G, family income X01H10G, poverty X01H18G, public assistance X01H15G, household composition X01H01G and X01H02G, parents' education X01P25G, school district X01H29G, tenure X01H28G, residence X01H22G, nonfarm farm X01H21G.

Chapter 3. Enrollment Patterns by Status of Children

This chapter describes whether or not school-age children—children ages 3 to 17 and those 18- and 19-year-olds who have not finished high school—were enrolled in school. Demographic and social factors like those described in the preceding chapter are examined first individually; then, a composite of factors that are thought to have the potential for a negative impact on a child's schooling is considered. These analyses are followed by reviews/analyses of private as opposed to public school enrollments, and prekindergarten enrollment.

Generally, the data cited in this chapter relate to national populations. As indicated in chapter 1, state and school district data are summarized in the School District Analysis Book (SDAB), which is available to the public. Therefore, educators, administrators, and others interested in public education can compare their local and state data to other local and state data and to national data.

This chapter has four sections:

- Enrollment Patterns of School-Age Children 5 to 19 Years Old, by Selected Characteristics
- Enrollment Patterns of Children at Risk
- Enrollment Patterns of School-Age Children 3 and 4 Years Old[1]
- Private School Enrollment Patterns

Before breaking into the sections, table 3-1 provides a quick overview of the percent of children enrolled in school and their characteristics within four age categories.

[1] This section does not discuss enrollment in public versus private prekindergarten programs because of data quality limitations, see appendix B.

Table 3-1. Percent of children enrolled by age and social characteristics: United States 1990

(School-age children 3 to 19 years old.)

Child characteristics	Total, 3-19 years	3-4 years	5-13 years	14-19 years
Total	82.7	28.9	92.2	88.4
Sex				
Male	82.5	28.7	92.1	87.9
Female	82.8	29.0	92.3	88.9
Race[1] and ethnicity				
White	83.8	29.8	92.3	90.1
Black	82.4	31.1	91.9	86.4
Hispanic	78.6	21.1	91.6	80.3
Asian or Pacific Islander	85.0	30.7	92.7	93.8
American Indian, Alaskan native	81.2	25.5	92.3	83.6
Language minority[2]				
Total	81.5	25.5	91.7	85.7
Linguistically isolated	74.5	19.6	90.4	68.7
Family income				
Less than $25,000	78.4	21.1	91.0	82.6
$25,000-$39,999	81.3	24.3	91.7	88.5
$40,000-$49,999	84.1	30.8	92.6	91.2
$50,000 and more	87.8	47.9	93.6	93.3
Poverty status				
In poverty	77.4	21.1	90.9	79.1
Not in poverty	84.0	31.0	92.5	90.7
Public assistance				
Receives public assistance	78.3	22.0	91.3	81.2
No public assistance	83.4	29.9	92.3	89.8
Household composition				
Married couple household	83.4	29.7	92.3	91.2
Single female head of household	82.1	27.1	92.1	85.4
Single male head of household	78.1	22.1	90.3	79.2
Nonfamily household	67.1	21.9	90.1	54.7
Institutions and group quarters	63.6	17.6	83.3	59.9

Table 3-1. Percent of children enrolled by age and social characteristics: United States 1990--Continued

(School-age children 3 to 19 years old.)

Child characteristics	Total, 3-19 years	3-4 years	5-13 years	14-19 years
Parents' education				
Living in two-parent household:	84.2	30.1	92.5	93.4
Both parents college graduates	87.8	49.5	94.1	97.3
Neither parent high school diploma	80.3	15.5	91.0	84.5
Living with mother only:	82.2	26.6	92.0	88.5
College graduate	90.0	45.5	94.2	94.9
High school diploma only	81.7	24.2	91.8	89.3
No high school diploma	77.4	19.4	90.2	82.2
Length of residence in present home				
Less than 1-1/4 years (1989-1990)	75.5	23.4	90.3	78.2
From 1-1/4 to 5-1/4 years (1985-1988)	81.0	29.8	91.8	89.2
From 5-1/4 to 10-1/4 years (1980-1984)	85.1	33.8	92.9	91.5
More than 10-1/4 years (before 1980)	89.1	29.9	93.9	91.8
Tenure				
Owner	85.4	32.5	92.8	92.2
Renter	77.5	23.4	91.0	80.8
Residence				
Inside metropolitan area	82.7	30.8	92.2	88.4
Central city	81.1	29.1	91.9	85.5
Not central city	83.7	32.0	92.4	90.3
Urban	83.8	33.7	92.5	90.2
Rural	83.6	26.1	92.2	90.7
Outside metropolitan area	82.4	21.1	92.1	89.1
Urban	82.1	24.1	92.2	88.3
Rural	82.5	19.2	92.0	89.5
Rural nonfarm	82.9	22.4	92.1	89.9
Farm	84.1	18.2	92.0	90.9

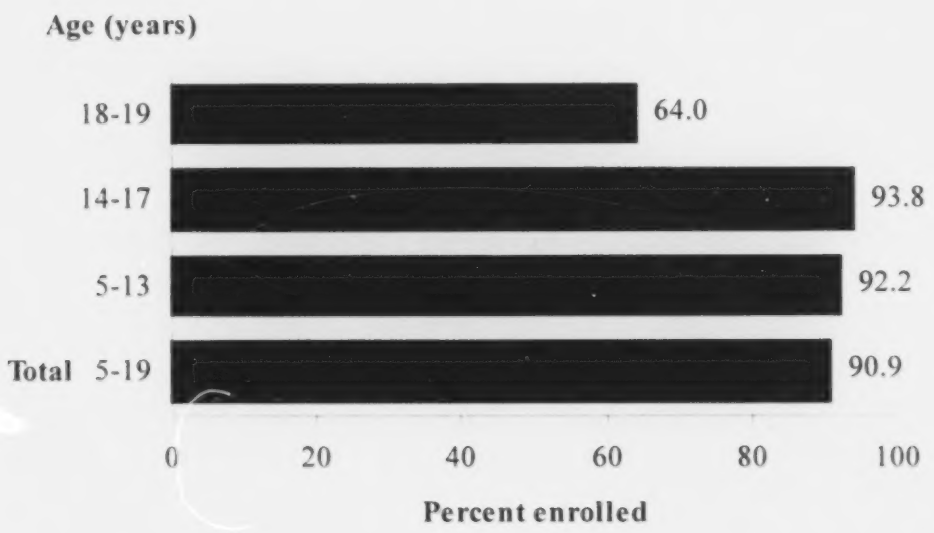
(1) All race groups are non-Hispanic. Tabulation excludes other races, not shown separately.
(2) Language spoken at home is other than English.

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation.* SDAB tabulation references: sex X01C03G, race X01C05G, language minority X01H08G and X01H09G, family income X01H10G, poverty X01H18G, public assistance X01H15G, household composition X01H01G and X01H02G, parents' education X01P25G, school district X01H29G, tenure X01H28G, residence X01H22G, nonfarm/farm X01H21G.

Enrollment Patterns of School-Age Children 5 to 19 Years Old, by Selected Characteristics

The vast majority of school-age youths were enrolled in school through age 17 (over 90 percent) (figure 3-1). There was, however, an increasing tendency for school-age children to have left school without finishing high school as their ages increased.[2]

Figure 3-1. Percentage of school-age children enrolled in elementary and secondary school, by age: 1990



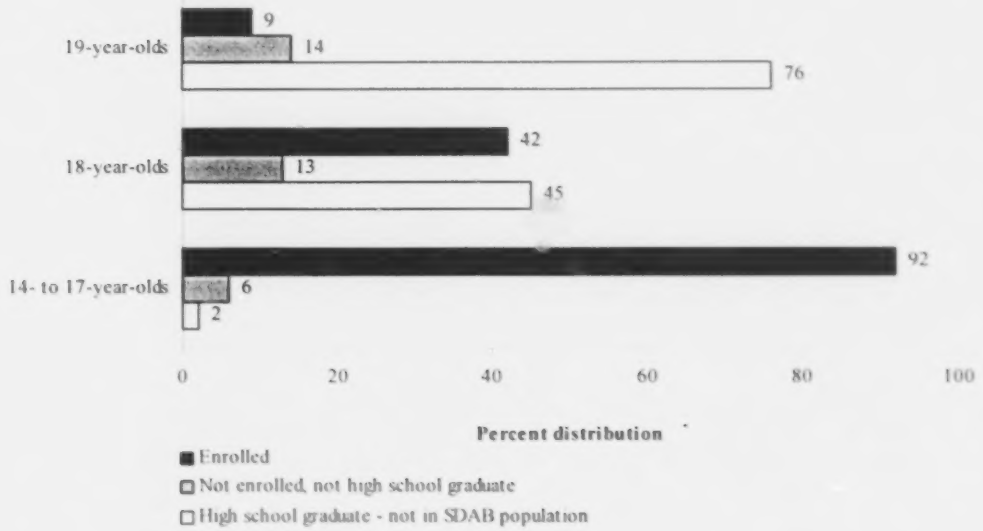
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference X01C02G.

[2] For further discussion, see U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. *Dropout Rates in the United States: 1990*. NCES 91-053. Washington, D.C.: 1991.

Among the teenagers ages 14 to 17, approximately 92 percent were enrolled in school, 2 percent had graduated, and 6 percent had dropped out (figure 3-2). By age 18, the percent still in school and the percent who graduated were fairly close (42 and 45 percent respectively, while the percent who dropped out increased to 13 percent. Then by age 19, about three-quarters had graduated, about 10 percent were still enrolled, and the percent who were dropouts was relatively stable at 14 percent.

Figure 3-2. Schooling status of 14- to 19-year-olds: 1990

(All persons 14 through 19 years old, including high school graduates excluded from SDAB)



Source: U.S. Bureau of the Census, *1990 Census of Population: Education in the United States*, CP-3-4, Washington, DC, 1994.

While a number of the 5- to 13-year-olds who were not in school were likely to be 5- and 6-year-olds who had not started school, some of the preteens and 13-year-olds had already dropped out of school: roughly 4 percent each of the 10-year-olds, the 11-year-olds, and the 12-year-olds were not enrolled, non-high school graduates.[3] Certainly, the 6 percent at ages 14 to 17 and the 13 and 14 percent who were not enrolled at ages 18 and 19 were dropouts. A more detailed consideration of variations in the enrollment patterns across several key social and demographic factors should help inform educators and policy makers as to which subgroups of young adults are most "at-risk" of not receiving educational services.

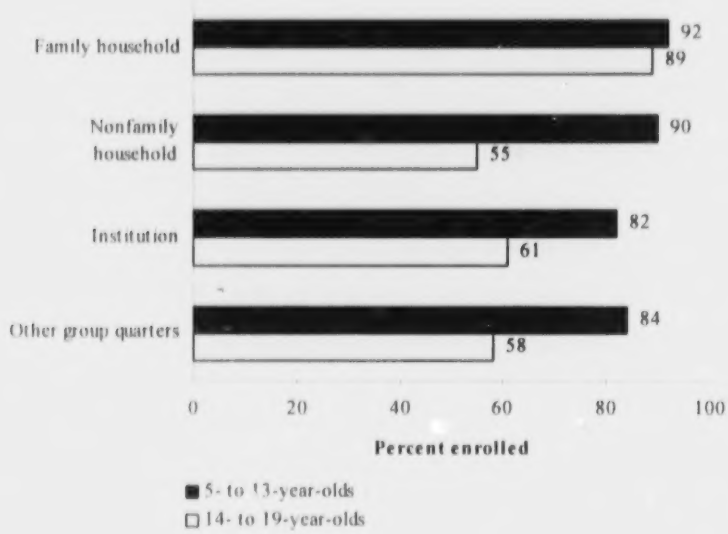
[3] U.S. Bureau of the Census, "Table 5, School Enrollment and Type of School by Age, Sex, Race, and Hispanic Origin: 1990," *1990 Census of Population: Education in the United States*, CP-3-4, p. 597.

Enrollment Patterns by Living Arrangements

Among school-age 5- to 19-year-olds, 75 percent of the children enrolled in school and 67 percent of the children not enrolled in school lived in families headed by a married couple (tabulation X01H01G).

Enrollment rates differed somewhat among different household arrangements. Children who lived in other than family households—institutions, nonfamily households, or other group quarters— were less likely to be enrolled in school than those living in family households. The differences were particularly notable among the 14- to 19-year-old populations. As figure 3-3 indicates, among 14- to 19-year-olds, 89 percent of children from family households were enrolled, compared to an average of less than 60 percent from other living arrangements. Differences in enrollment rates were not as striking among 5- to 13-year-olds.

Figure 3-3. Enrollment patterns by living arrangements by age: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references X01H01G and X01H02G.

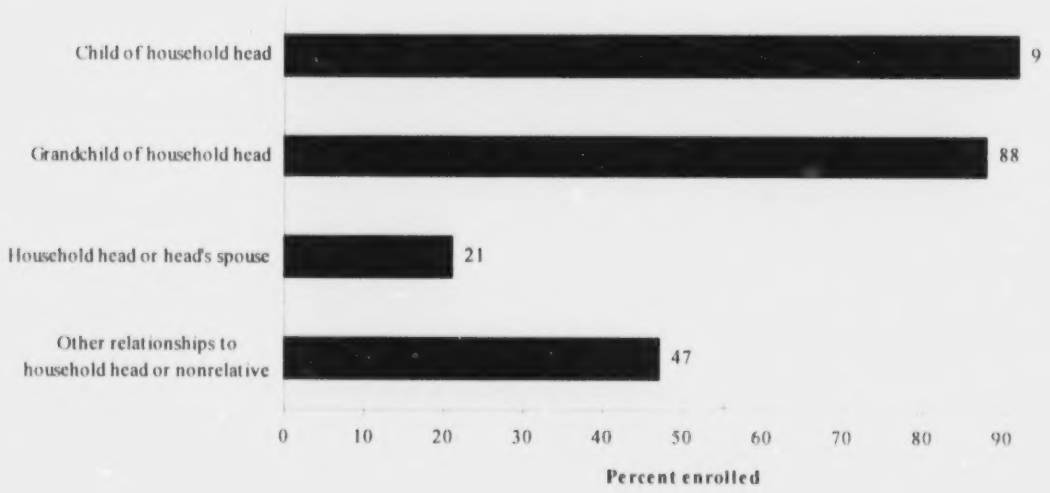
Enrollment Patterns by the Relationship to Household Head

Of the 48 million children 5 to 19 years old, 90 percent were either born to, adopted by, or stepchildren, of their live-in parents. Roughly five percent each lived with grandparents (2,000,000) and lived with other relatives or nonrelatives (2,100,000) (tabulation X01C06G).

Generally, children living with grandparents or other head-of-household relatives had somewhat lower enrollment rates than children living with birth, adopted, or stepparents. Of the 1.2 million children who were not related to household heads, about one-fourth (more than 300,000) were not enrolled (tabulation X01C06G).

The most striking data relate to the nearly 300,000 teenagers who were themselves heads of households or spouses. As figure 3-4 shows, over 20 percent of these teenagers were enrolled in school. Although they represented a relatively small group overall—only about two percent of all those 14 to19 years old—they constituted 12 percent of all 14- to 19-year-olds not enrolled (tabulation X01C06G).

Figure 3-4. Percent of enrolled 5- to 19-year-olds, by relationship to household head: 1990



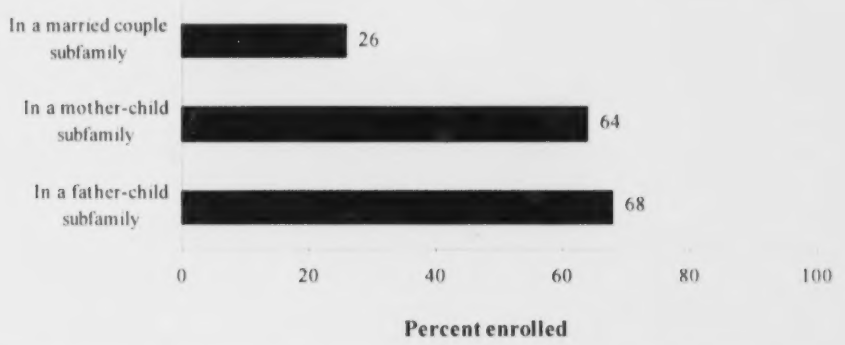
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C06G.

Enrollment Patterns by Subfamilies

Subfamilies are parent-child groups living with (grand)parents or other householder-relatives. Subfamilies include married couple subfamilies—a married couple with or without never-married children under 18 years old—and mother-child/father-child subfamilies—one parent with one or more never-married children under 18 years old. The education system is interested in the subfamily parents and children until they graduate high school or reach the age of 20. (If only one spouse in a subfamily was a non-high school graduate under 20, that was the spouse counted for this report.)

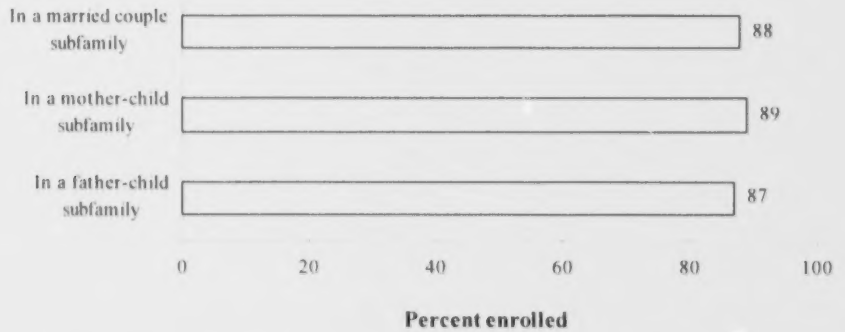
Unlike the teenaged householders and spouses discussed in the prior section, married couple subfamilies live with adult relatives, but they share a low enrollment rate: 26 percent for married couple subfamily parents, 21 percent for teenaged householders and spouses. In comparison, more than 60 percent of parents in single parent-child subfamilies were enrolled (figure 3-5a). Figure 3-5b shows enrolled rates for the children in the three types of subfamily groups.

Figure 3-5a. Enrolled subfamily parents up to 19 years old, by subfamily type: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C08G

Figure 3-5b. Enrolled subfamily children 5 to 19 years old, by subfamily type: 1990



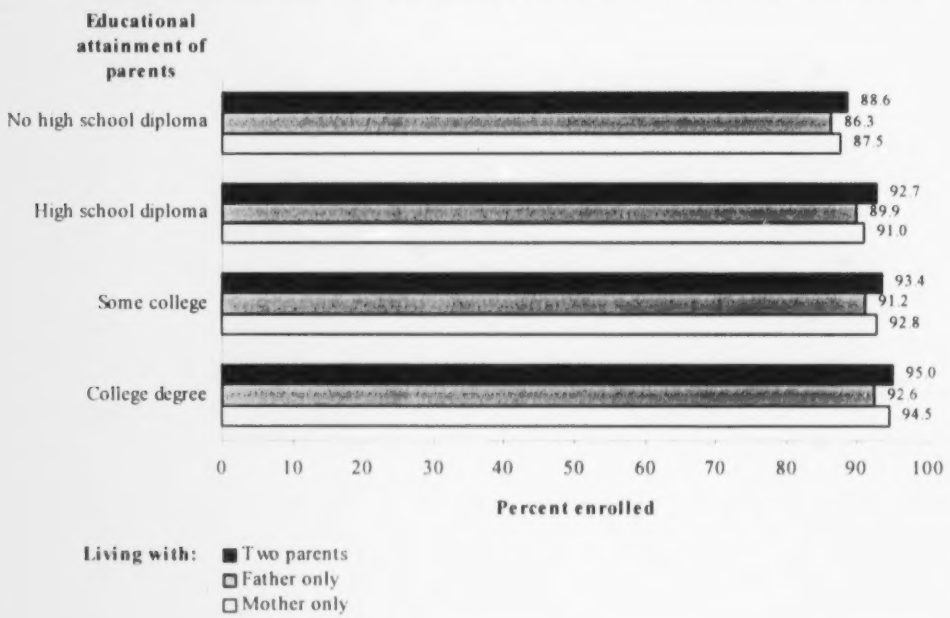
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C08G

Enrollment Patterns by Parents' Education

The educational background of the parents in the household had a very strong relationship to their children's enrollment rates, especially for teenagers. Those aged 14 to 19 years living in families where neither parent was a high school graduate were less likely to be enrolled in school than teenagers living with two college-graduate parents (85 percent enrolled versus 97 percent) (tabulation X01P25G).

As figure 3-6 illustrates, among all those in the 5- to 19-year-old school-age population, those least likely to be enrolled were children living with a solo father who did not have a high school diploma.

Figure 3-6. Enrolled 5- to 19-year-olds, by educational attainment of parent(s) with whom the child lives: 1990



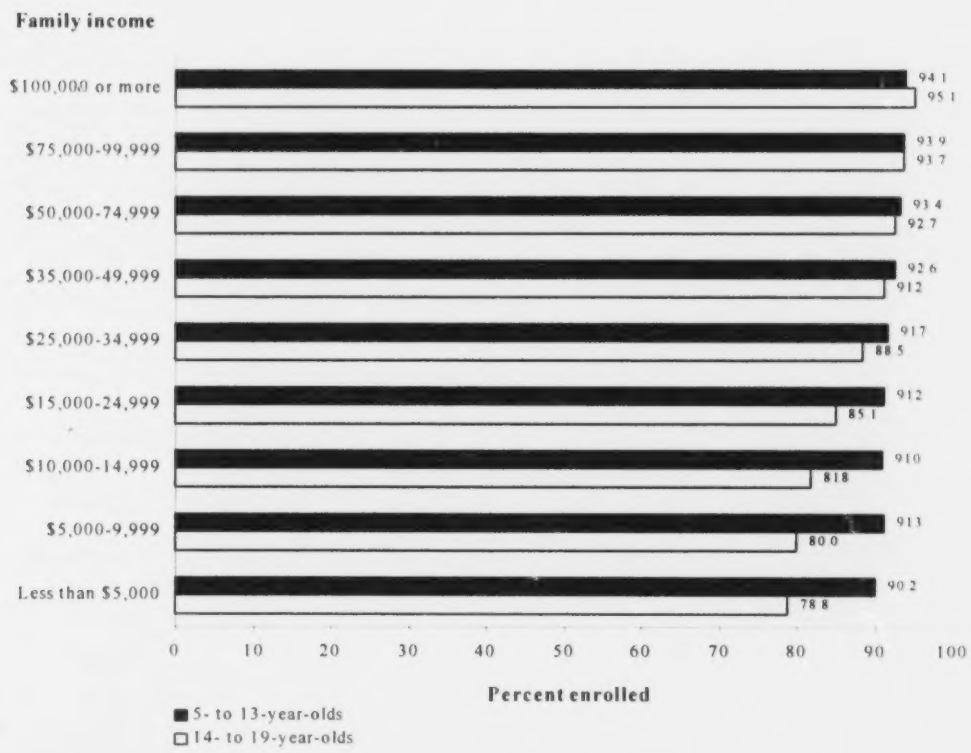
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01P25G.

Enrollment Patterns by Income and Poverty Level

Of children 5 to 19 years old, close to 8.5 million (18 percent) lived in families with incomes below the poverty level (which was $12,674 in 1989 for a family of four persons). Children from these families were less likely to be enrolled in school than other children. This was especially true for 14- to 19-year-olds. Seventy-nine percent of teenagers whose families had incomes below the poverty level were enrolled, compared with 9 percent of teenagers whose families had incomes above poverty level (tabulation X01H18G). Nineteen percent of the children not enrolled lived in families receiving public assistance, compared to 11 percent of the children who were enrolled (tabulation X01H15G).

As figure 3-7 shows, the lower the family income, the lower the percentage of enrolled. To illustrate, about 79 percent of children (14 to 19) in families with incomes under $10,000 were enrolled. This compares to an average of about 94 percent enrolled among children in this age group in families with incomes of $50,000 or more.

Figure 3-7. Enrolled 5- to 19-year-olds, by family income: 1990

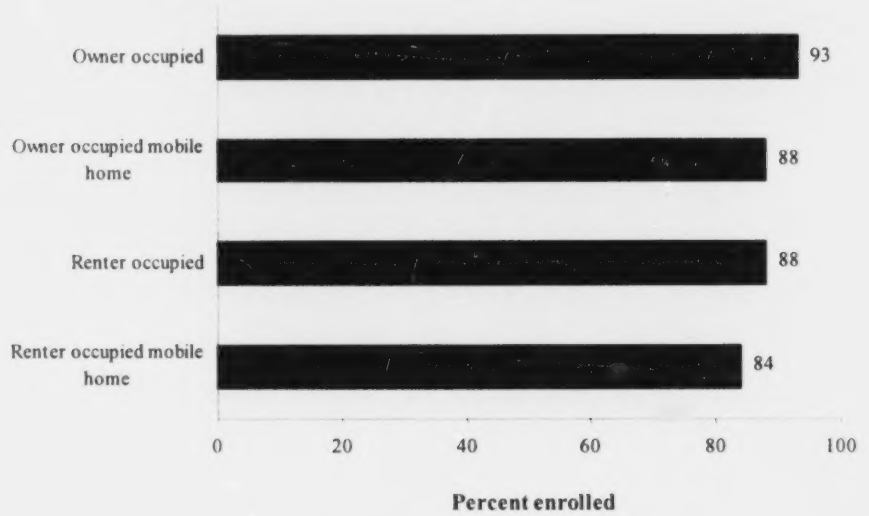


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references X01H12G and X01H15G.

Enrollment Patterns by Housing Type

Of the 48 million school-age children (5 to 19 years old), almost two-thirds lived in owner-occupied units. Figure 3-8 illustrates that generally children from home-owning families had higher enrollment rates than those from rental resident families (93 percent versus 88 percent).

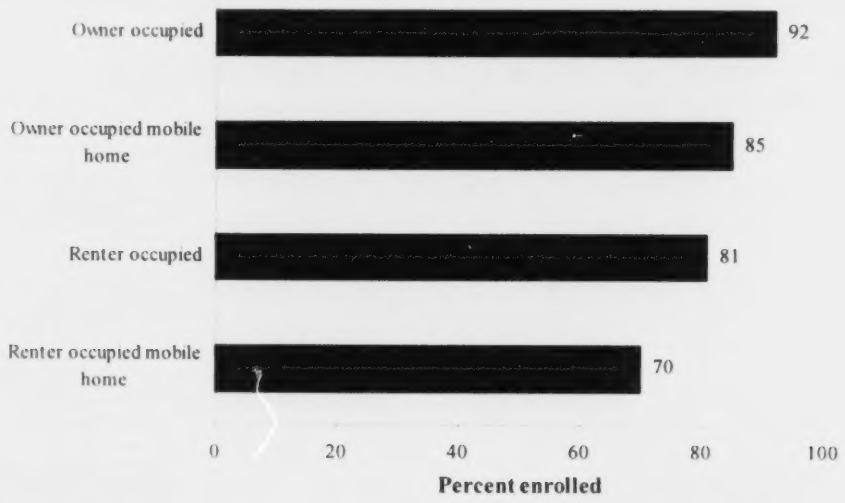
Figure 3-8. Enrolled 5- to 19-year-olds by household ownership status: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H28G.

Children living in rented mobile homes were least likely to be enrolled in school. As figure 3-9 illustrates, 70 percent of the children 14 to 19 years of age living in rented mobile homes were enrolled and 85 percent of those living in family-owned mobile homes were enrolled. The percent of not enrolled is 30 percent to 15 percent, or 2 to 1.

Figure 3-9. Enrolled 14- to 19-year-olds, by household home-ownership status: 1990

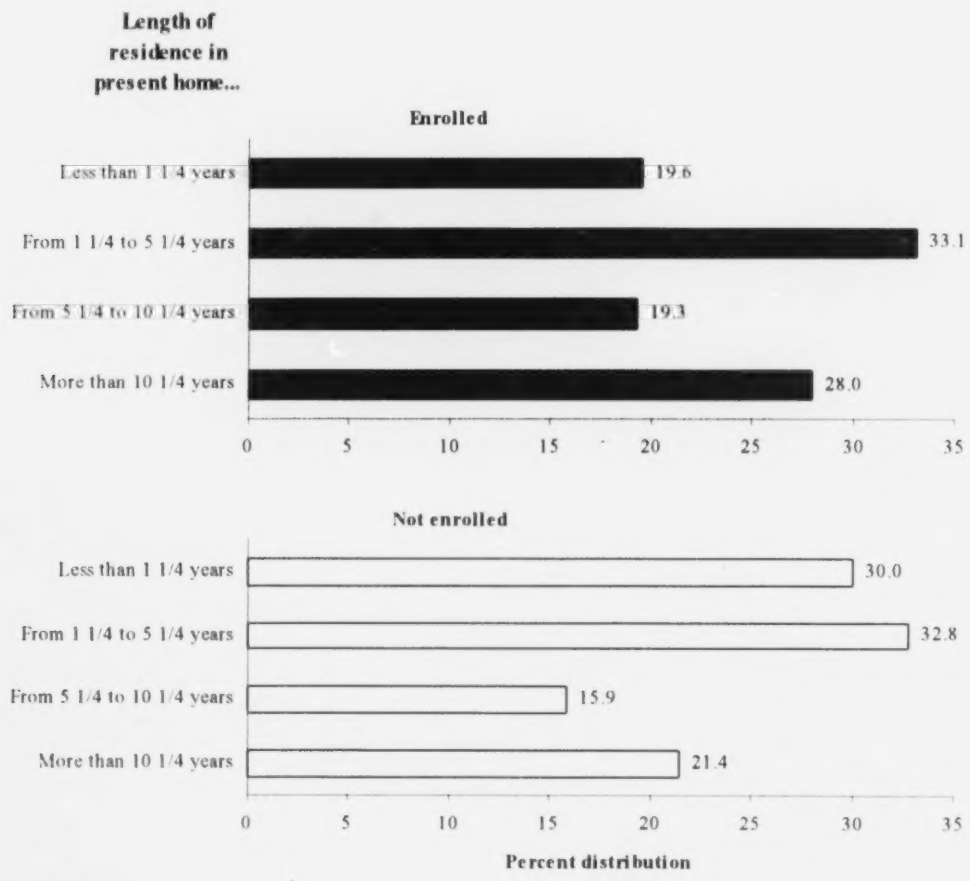


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H28G.

Enrollment Patterns by Family Mobility

There is a clear relationship between a family's mobility and children's enrollment rates. One measure of a family's mobility is length of residence. As figure 3-10 illustrates, among children not enrolled in school, 30 percent had recently moved, compared to 20 percent of enrolled children who had recently moved. (Recent movers are defined in the SDAB as persons who moved in the year and a quarter (Jan. 1989- Mar. 1990) before the 1990 census data were collected.)

Figure 3-10. Distribution of enrolled and not enrolled 5- to 19-year-olds, by mobility: 1990



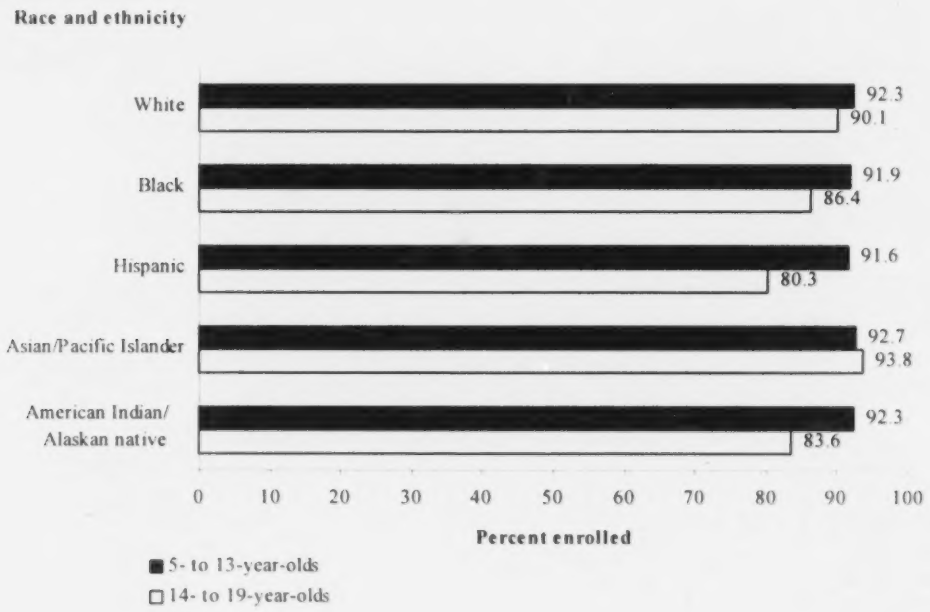
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation.* SDAB tabulation reference X01H29G.

The not enrolled rate was higher for recently moved teenagers. About 34 percent of children 14 to 19 years old who were not enrolled in school (619,000 out of 1,800,000) lived in families that moved from 1989 to 1990. In contrast, 16 percent of the enrolled children moved during that same time frame (tabulation X01H29G).

Enrollment Patterns by Race and Ethnicity

Comparing enrollment status across racial and ethnic groups, Hispanics aged 14 to 19 years old were less likely than other groups to be enrolled (figure 3-11). The enrolled rate for 5 to 13 year old children was similar across ethnic groups—about 92 percent.

Figure 3-11. Percentage of children enrolled by race/ethnicity and age group: 1990



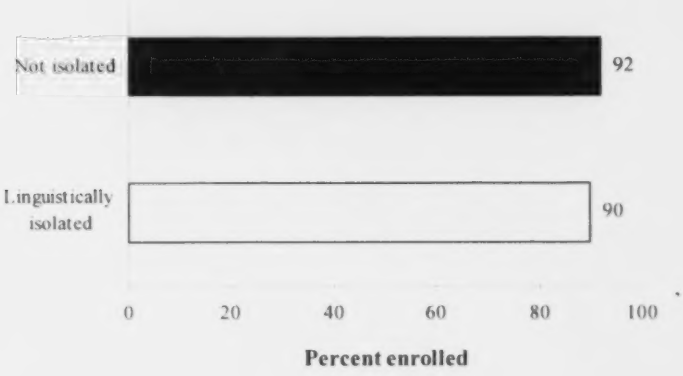
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C05G. Figures shown in table 3-1.

Enrollment Patterns by Linguistic Isolation of Household

There were 2.3 million school-age children who lived in households where the language spoken at home was other than English and no member 14 years old or older spoke English "very well." Such households are referred to as "linguistically isolated."

For the majority of children between 5 and 13 years old—ages at which school attendance is universally mandatory (except age 5)—overall enrollment rates averaged about 90 percent and differed little between the language skill groups.

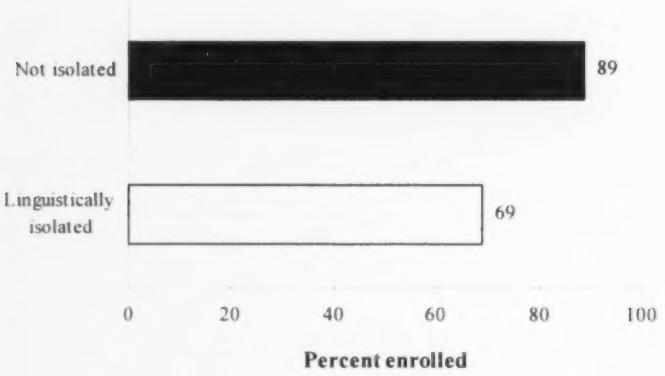
Figure 3-12. Enrolled 5- to 13-year-olds, by linguistic isolation: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference X01H09G.

But significant differences emerged in the rates for children aged 14 to 19; teenagers in linguistically isolated households were less likely to be enrolled than teenagers in households where English was spoken as a matter of course (69 percent and 89 percent—i.e., the not enrolled rate for teenagers in linguistically isolated households was almost three times higher, 31 percent to 11 percent—see figure 3-13).

Figure 3-13. Enrolled 14- to 19-year-olds, by linguistic isolation: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H09G.

Enrollment Patterns among All School-Age 14- to 19-Year-Olds

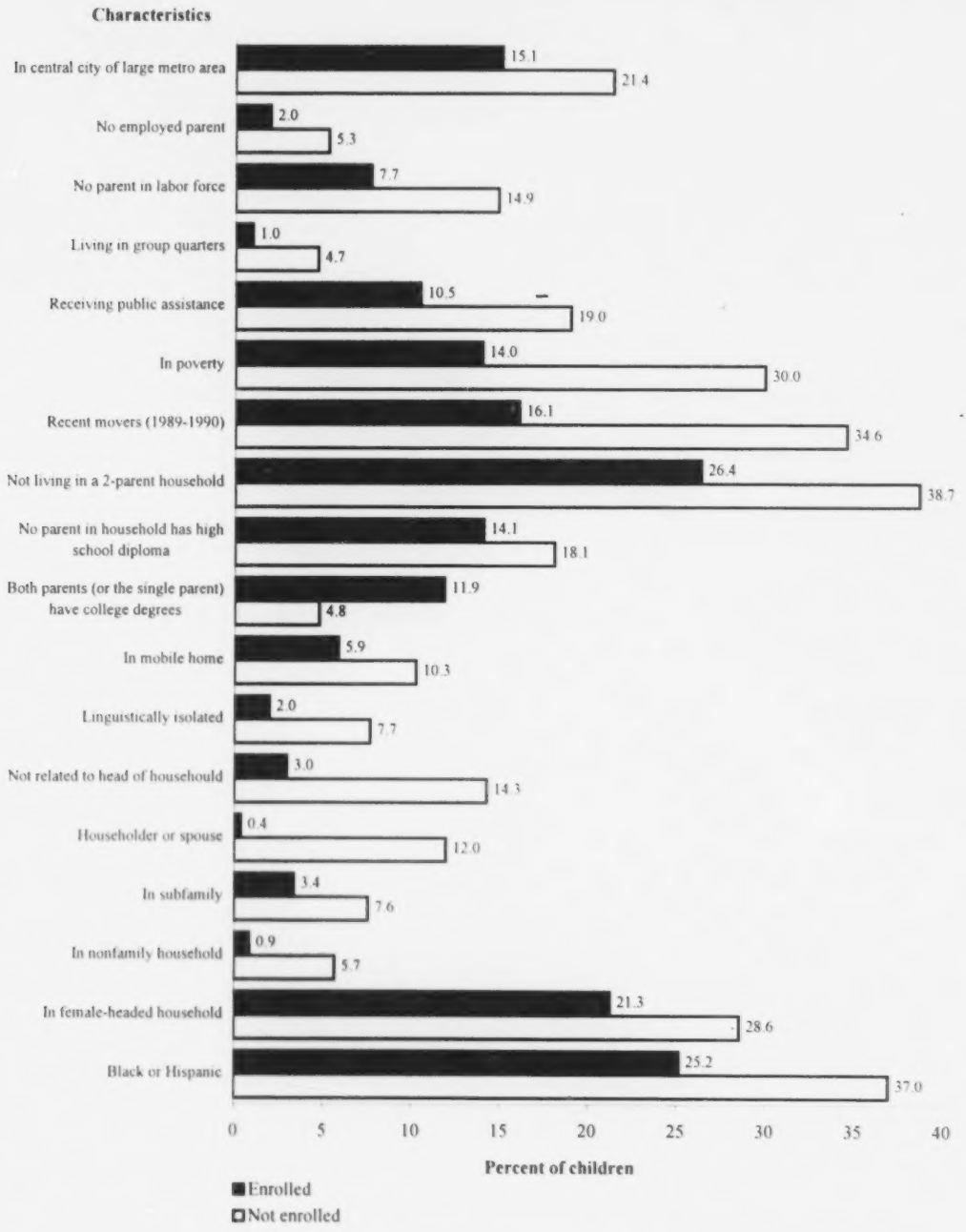
The 14- to 19-year-old age group had a higher proportion of children not enrolled than did the 5- to 13-year-old age group (11.2 percent versus 7.8 percent). Among 14- to 19-year-olds, 14.1 million were enrolled and 1.8 million were not enrolled. As illustrated in figure 3-14, those not enrolled were more likely than those enrolled to:

- Reside in the central city of a large metropolitan area
- Have no employed parent
- Live in an institution or other group quarters
- Be unrelated to the household head
- Live in a family receiving public assistance
- Live in poverty
- Have moved in the past year
- Not live in a two-parent household
- Live in a mobile home
- Live in a linguistically isolated household
- Be a teenage householder or spouse of householder
- Be in a subfamily
- Be black or Hispanic.

Among the 14.1 million 14- to 19-year-olds who were enrolled, 14 percent lived in families with incomes below the poverty level, almost 26.5 percent did not live in a two-parent household, and just over 15 percent lived in the central city of a large metropolitan area. A bit over 25 percent were black or Hispanic.

Among the 1.8 million 14- to 19-year-olds who were not enrolled, 30 percent lived in families with incomes below the poverty level, almost 40 percent did not live in two-parent households, and over 21 percent lived in the central city of a large metropolitan area. Thirty-seven percent were either black or Hispanic.

Figure 3-14. 14- to 19-year-olds, enrolled and not enrolled: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation.* SDAB tabulation references: central city X01H25G, employed parent and parent in labor force X01P26G, group quarters X01H02G, public assistance X01P22G, poverty X01H18G, movers X01H29G, 2-parent X01H01G, high school diploma and college degree X01P25G, mobile home X01H28G, linguistically isolated X01P06G, nonrelative and householder X01C06G, subfamily X01C08G, nonfamily and female-headed X01H01G, black or Hispanic X01C04G.

Enrollment Patterns of Children at Risk

The SDAB defines children as being "at risk"—meaning likely to have difficulty attending, performing well in, or completing school—if their mothers have a certain combination of characteristics. These characteristics, which tend to be associated with children who do not perform as well in school as their peers, are that the mother:

- Is not married,
- Is not a high school graduate,
- Meets the poverty criteria, and
- Was under 20 years old at the time of the child's birth.

Using these criteria, about 860,000 children 0 to 19 years old were categorized as being at risk (out of a total 0 to 19-year-old population of 71.3 million). If the mother's age was not considered relevant, then a much larger group of children was defined as at risk: children whose mothers were unmarried, lived in poverty, and had not completed high school numbered close to 3.8 million (table 3-2). Unless otherwise specified, it is this larger group that is analyzed in this section because the population of the many data cells becomes to thin to analyze satisfactorily if only the smaller group is used.

Characteristics of at-risk children are summarized in table 3-2 and 3-3 and the following sections.

Table 3-2. Children (0 to 19 years old) at risk, by age groups: 1990

Age	At-risk children Number (in thousands)	At-risk children born to a mother under 20 Number (in thousands)
Under 4 years old	997	176
4- to 5-year-olds	452	19
6- to 19-year-olds	2,331	662
Total (0- to 19-year-olds)	3,780	857

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references E10A14R, E10A16R, and E10A18R.

Almost half of those 3.8 million at-risk children were black. About one-fourth were white, and just above one-fourth were Hispanic (table 3-3). (All race groups are non-Hispanic.)

Table 3-3. Children (0 to 19 years old) at risk, by race and ethnicity: 1990

	At-risk children		At-risk children born to a mother under 20	
Race and ethnic origin	**Number (in thousands)**	**Percent of total**	**Number (in thousands)**	**Percent of total**
Hispanic	980	26	205	24
White	1,011	27	216	25
Black	1,645	44	411	48
Asian or Pacific Islander	59	1	8	1
American Indian, Alaskan native, and Aleut	75	2	15	2
Other	10	0	2	0
Total	3,780	100	857	100

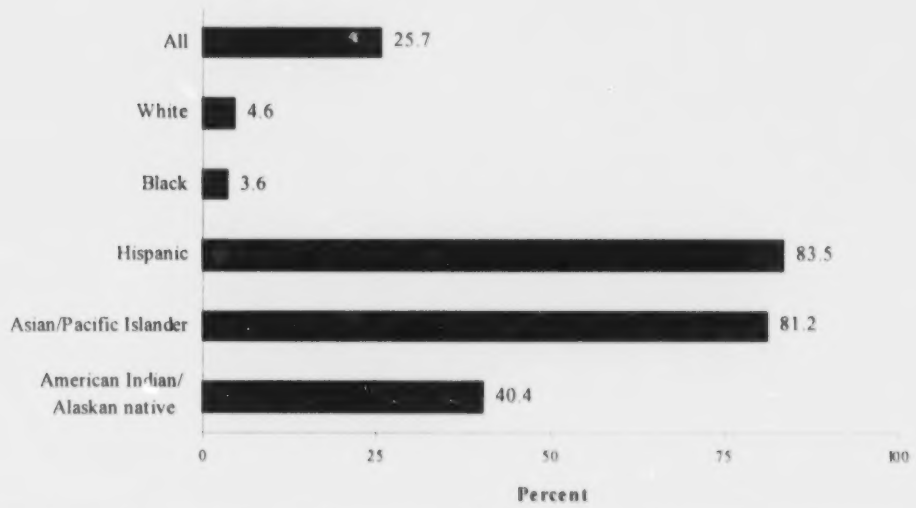
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references E10A13R, E10A13R, and E10A17R.

Enrollment Patterns of 4- and 5-Year-Old Children at Risk by Language

About one out of every four at-risk children 4 to 5 years old had a mother whose usual language spoken at home was something other than English. Less than half of these mothers spoke English "very well."

Of Hispanic origin at-risk, 4- or 5-year-old children, 83 percent had mothers who spoke a language other than English at home (figure 3-15).

Figure 3-15. Percent of 4- to 5-year-old at-risk children whose mothers spoke a language other than English, by race and ethnicity: 1990

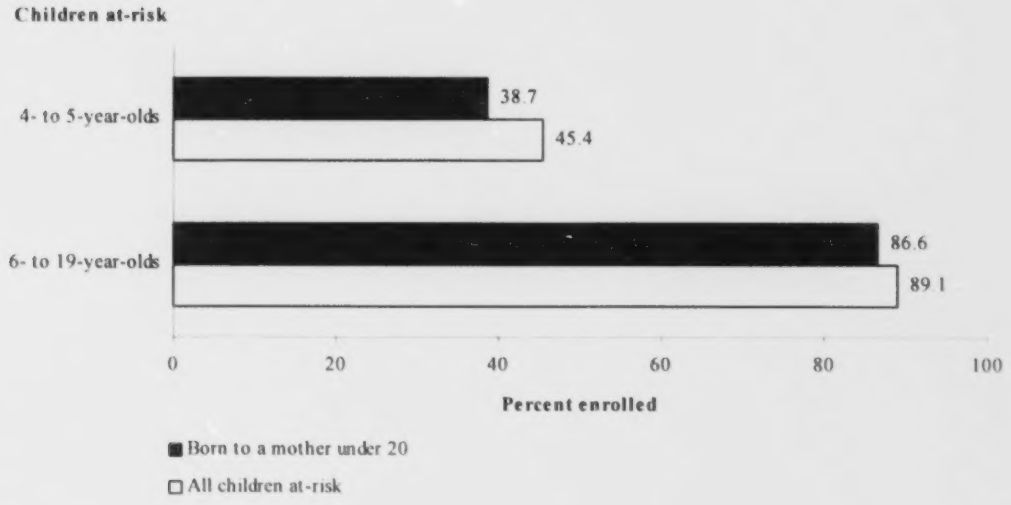


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references E08A15R and E10A15R.

Enrollment Patterns of Children at Risk by Status of Mother

At-risk students were only slightly less likely than those not at-risk to be enrolled (figure 3-16). (As shown in figure 3-1, overall 91 percent of the 5- to 19-year-old population was enrolled.) Of the at-risk children who were between 6 and 19 years old and had not yet graduated from high school, 89 percent were enrolled in school. Only 11 percent of at-risk students from 6 to 19 years old (about 250,000) were not enrolled. However, less than half of the at-risk children aged four to five were enrolled in school.

Figure 3-16. Enrolled at-risk children: 1990

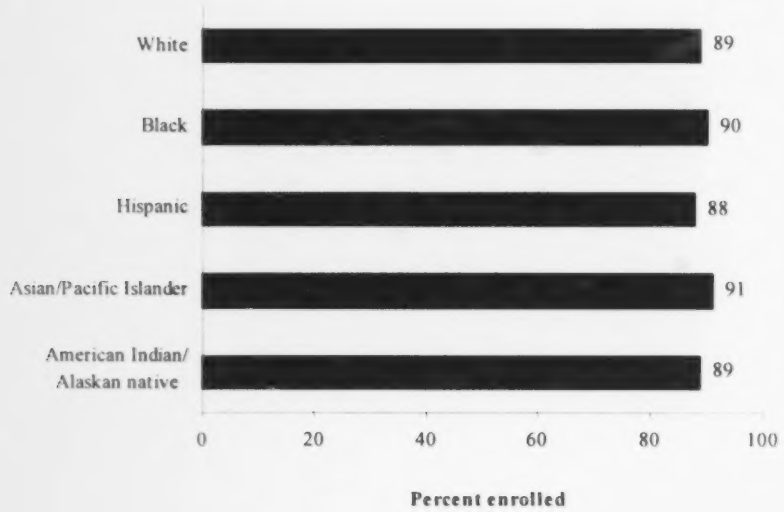


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references E10A15R and E10A17R.

Enrollment Patterns of Children at Risk by Race and Ethnicity

The enrollment rates among at-risk 6- to 19-year-olds were strikingly similar regardless of the race or ethnicity of the child. In this group, enrollments ranged from 88 percent for Hispanic at-risk children to 91 percent of Asian/Pacific Islanders' at-risk children (figure 3-17). The percent enrolled when looking at all children was 89 percent (tabulation E10A17R).

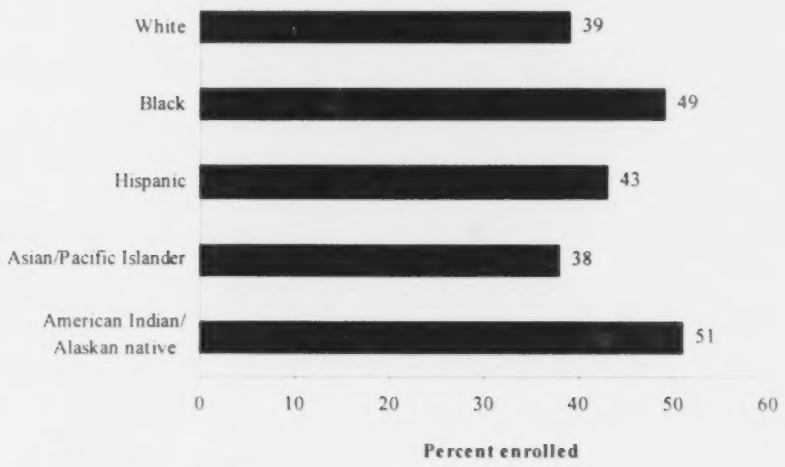
Figure 3-17. Enrolled at-risk 6- to 19-year-olds, by race and ethnicity: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference E10A17R.

Although differences among ethnic groups were relatively small in the 6- to 19-year-old population, they were noticeable when examining the enrollment of young, at-risk children. Among at-risk 4- to 5-year-olds, 45 percent were enrolled in school (tabulation E10A15R). White and Asian/Pacific Islander children were least likely to be enrolled (39 percent and 38 percent respectively). The highest enrollment rates were among the black and American Indian groups (49 percent and 51 percent respectively).

Figure 3-18. Enrolled at-risk 4- to 5-year-olds, by race and ethnicity: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference E10A15R.

Enrollment Patterns of Children at Risk in Public Prekindergarten

About half (52 percent) of the at-risk 4- and 5-year-olds lived in school districts that did not offer public prekindergarten programs (tabulation E10A15R).

The enrollment of at-risk 4- and 5-year-old children was slightly higher in school districts that offered public prekindergarten than in districts where no public prekindergarten was offered. The enrollment rate was 48 percent of at-risk 4- and 5-year-olds in school districts offering public prekindergarten, compared with only 43 percent of those in school districts with no public prekindergarten. (See table 3-4.)

Table 3-4. Preschool enrollment of at-risk 4- and 5-year-olds, by availability of public prekindergarten: 1990

Enrollment	Public prekindergarten available	Public prekindergarten not available
Enrolled	47.6	42.6
Not enrolled	52.4	57.4
Total	100.0	100.0

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation.* SDAB tabulation reference E10A15R.

Kindergarten availability was almost universal; only one percent of the at-risk 4- to 5-year-olds lived where it was not available. (Generally, of the 3.7 million 5-year-olds, 1.6 million were enrolled in prekindergarten school and 900,000 were enrolled in grades 1-5, but figures for the at-risk group are not available separately.)

Enrollment Patterns of School-Age Children 3 and 4 Years Old (i.e., Prekindergarten-Age)

Of the 7.3 million prekindergarten children ages 3 or 4 years old in the United States, about one-third were enrolled in public or private prekindergarten programs. Twice as many 4-year-olds were enrolled as 3-year-olds. (This section does not discuss enrollment in public versus private prekindergarten programs because of data quality limitations, see appendix B.)

However, participation in prekindergarten was not uniform across the population; the proportion varied by degree of urbanicity, race, parental background, income, availability of public prekindergarten, and other factors.

Figure 3-19 shows how prekindergarten enrollment of 3- and 4-year-olds varied from state to state. Categories reflect enrollment populations from less than 20 percent to more than 35 percent. Specifically, from the extremes of the range, in North and South Dakota 16 percent of children were enrolled in prekindergarten, while in Connecticut, New Jersey, and the District of Columbia 40 percent or more were enrolled.

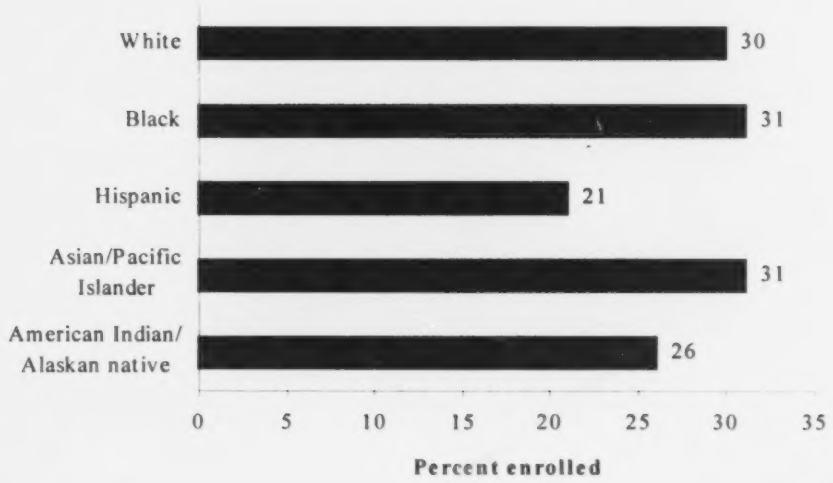
Figure 3-19. Percentages of 3- to 4-year-olds enrolled in prekindergarten: 1990

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01G01.

Enrollment in Prekindergarten by Race and Ethnicity

As mentioned in the previous section, almost one-in-three 3- and 4-year-old children were enrolled in prekindergarten. However, participation in prekindergarten was not uniform across the population; the proportion varied by race. For example, only one-in-five Hispanic children attended prekindergarten; white, black, and Asian/Pacific Islander children participated near the one-in-three average.

Figure 3-20. Variations in prekindergarten enrollment rates, by race and ethnicity: 1990



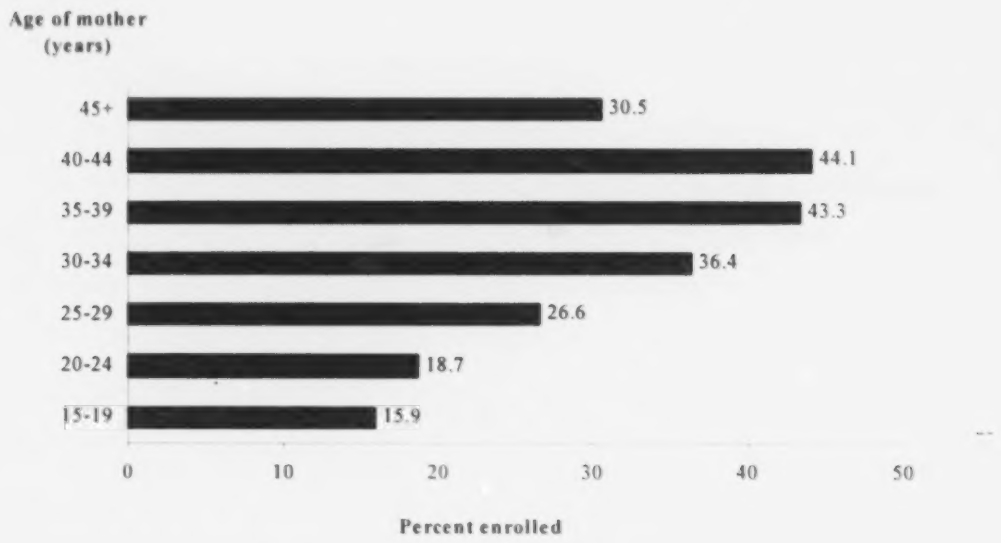
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C05G.

Enrollment in Prekindergarten by Mother's Current Age

When the mother in the household was very young, children in that household were much less likely to participate in prekindergarten than the 3- to 4-year-old population overall. For example, as figure 3-21 shows, the children in households with 15- to 19-year-old mothers were about three times less likely to be enrolled in prekindergarten than the children in households with 40- to 44-year-old mothers (16 percent enrolled versus 44 percent).

Participation by children of 30- to 44-year-old mothers was above the national average while participation by children of mothers younger than 30 or older than 45 was lower. However, with regards to the extreme ends of the range, the children of younger mothers had lower participation rates than those of older mothers.

Figure 3-21. Enrolled prekindergarten children, by current age of mother in household: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01P01G.

Enrollment in Prekindergarten by Parents' Education

The relationship between the educational background of the parents in the household and children's prekindergarten participation was very strong. For any given family structure—for example, two-parents or mother-only—the greater the educational attainment of the parent(s) in the household, the higher was the prekindergarten enrollment. Children living with parents who had college degrees were about twice as likely to be enrolled in prekindergarten as those living with parents who did not have college degrees. See table 3-5.

Table 3-5. Percent of 3- to 4-year-olds enrolled in prekindergarten, by parents' education: 1990

Family structure	No high school diploma	High school diploma	College degree
Two-parents	16	20	50
Mother-only	19	24	45

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01P25G.

Enrollment in Prekindergarten for Children of Single Parents

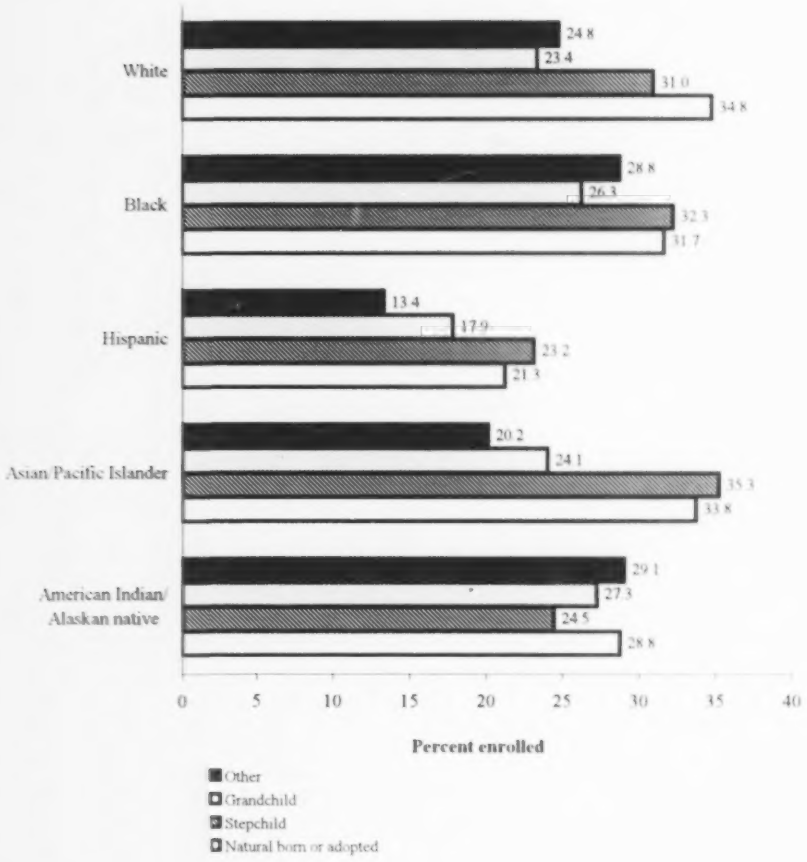
One-fourth of 3- and 4-year-old children lived in single parent families. Children from female-headed families participated in prekindergarten programs at a slightly lower rate than children living in married couple families (27 percent versus 30 percent). Among 3- and 4-year-olds in male-headed families, only 22 percent attended prekindergarten. (See tabulation X01H01G.)

Enrollment in Prekindergarten by Race and Ethnicity and Relationship to Household Head

Prekindergarten participation rates varied by race and relationship to guardian. For example, the overall participation rate for Asian children was 33 percent, above the national average of 32 percent (tabulation R02C06R); however, as shown in figure 3-22, the rate was about 12 percentage points lower for Asian children whose guardian was not a natural, adopted, or step-parent. Although the enrollment rates were lower for Hispanics, the same pattern occurred.

The participation rates of black and American Indian children were relatively similar regardless of the child's relationship to the guardian (figure 3-22).

Figure 3-22. Prekindergarten enrollment, by relation to household head and race and ethnicity: 1990

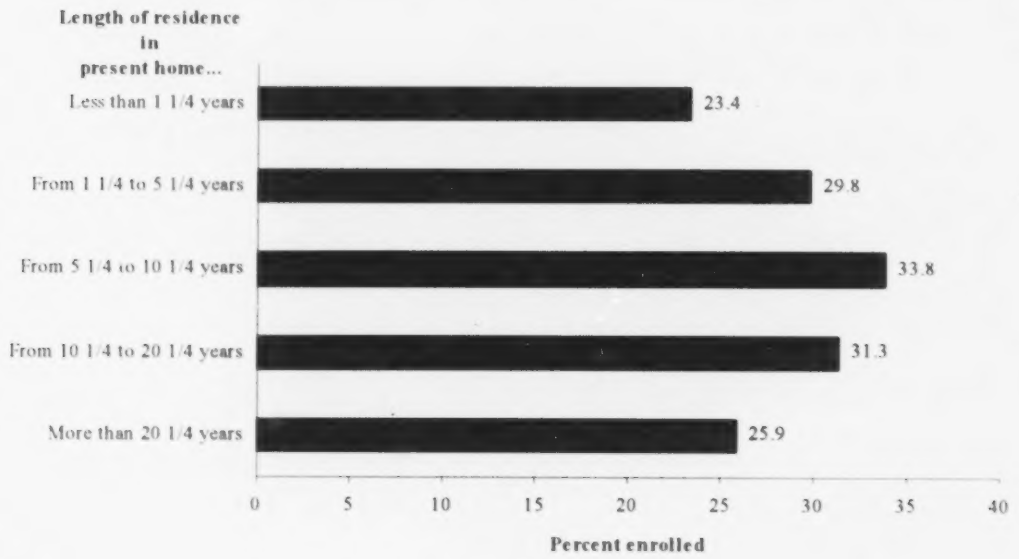


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference R02C06R.

Enrollment in Prekindergarten by Family Mobility

Children not enrolled in prekindergarten were more likely to live in families that had recently moved. For example, the participation rate of children whose families moved into their housing in the prior 15 months was only 23 percent—significantly lower than the enrolled 34 percent whose families had lived in the same home for 5 to 10 years (figure 3-23).

Figure 3-23. Prekindergarten enrollment, by length of residence in home: 1990

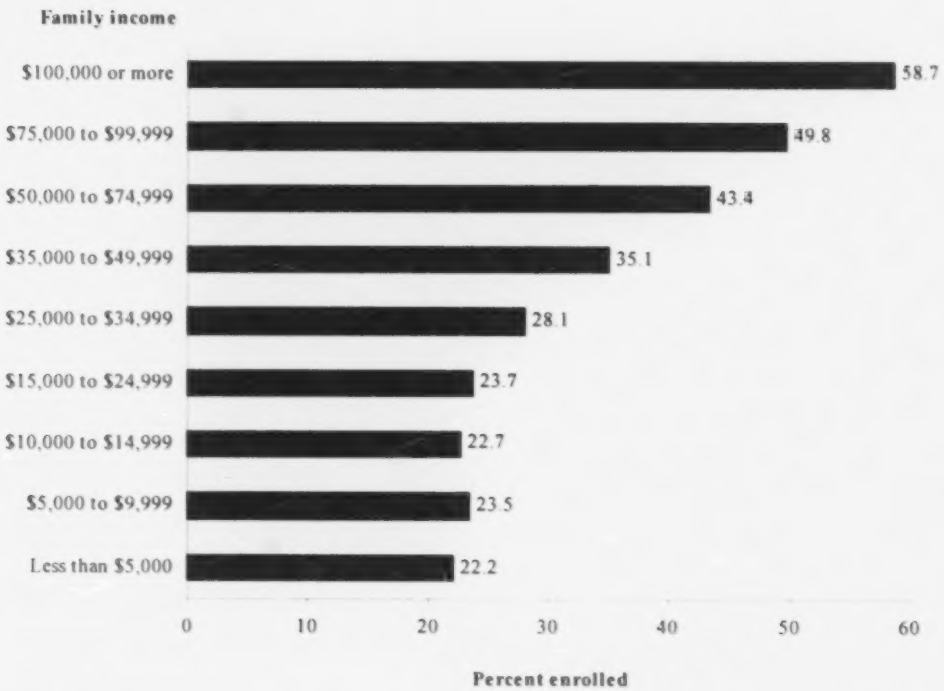


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H29G.

Enrollment in Prekindergarten by Family Income

Children from low income families were much less likely than children from high income families to be enrolled in prekindergarten. As can be seen in figure 3-24, the enrollment rate for children from families with low annual incomes was about 23 percent compared to about 50 percent or greater for high income families. (Low annual incomes were less than $25,000; high annual incomes were $75,000 or more. In 1989 the median family income was $34,213.)

Figure 3-24. Prekindergarten enrollment, by family income: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference P01H12G.

Enrollment in Prekindergarten by Family Income and Race

Fifty percent or more of all children in families with incomes of $100,000 or more were enrolled in prekindergarten, with the exception of Hispanic children. Hispanic children were less likely to be enrolled in prekindergarten, regardless of family income. Only at the higher income levels ($50,000 and above) did Hispanic prekindergarten enrollment approximate the national one-in-three participation rate. At the lower income levels (below $25,000), black and American Indian children were somewhat more likely to be enrolled in prekindergarten than children of other racial and ethnic groups. See table 3-6.

Table 3-6. Prekindergarten participation rates of 3- to 4-year-olds by family income and race and ethnicity: 1990

Family income	White	Black	Hispanic	Asian/ Pacific Indian	American Indian/ Alaskan native
$100,000 or more	59.7	49.7	43.6	53.0	51.2
$75,000-$99,999	50.9	45.9	34.9	44.8	37.2
$50,000-$74,999	44.5	42.5	28.6	40.2	35.8
$35,000-$49,999	35.8	36.2	23.8	33.5	29.5
$25,000-$34,999	28.5	32.6	19.5	26.6	29.0
$15,000-$24,999	23.4	29.0	17.0	22.5	26.5
$10,000-$14,999	22.3	27.8	16.7	22.1	28.9
$5,000-$9,999	23.4	26.8	17.5	22.1	28.3
Less than $5,000	22.6	24.1	16.9	21.8	25.0

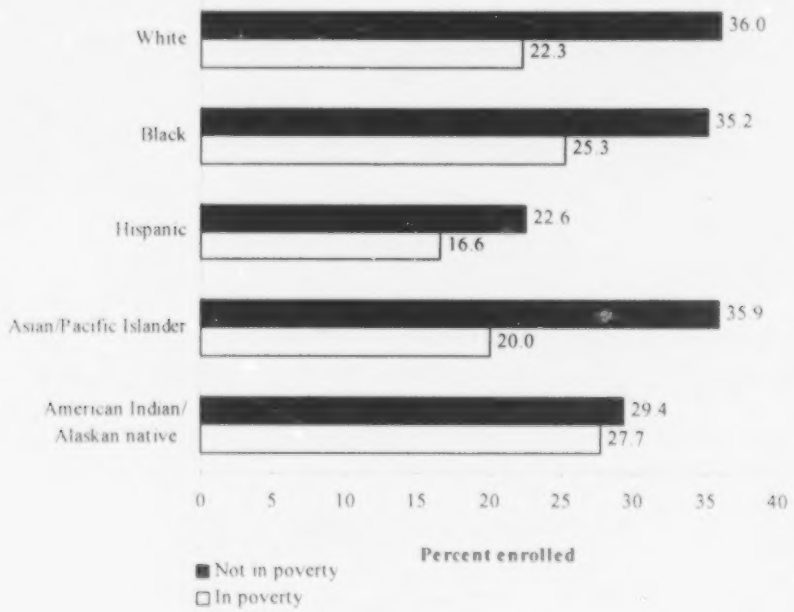
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference R02H10R.

Enrollment in Prekindergarten by Poverty Status and Race and Ethnicity

Nearly 1.5 million, almost 20 percent, of the nation's 3- and 4-year-old children lived in families with incomes below the poverty level. For black and American Indian children, the proportion was much higher (43 percent). One-third of Hispanic 3- and 4-year-olds lived in poverty, while only about 12 percent of white children had families with poverty-level incomes. (See tabulation R02H18R.)

Overall about one-third of 3- and 4-year-olds were enrolled in prekindergarten. But among those living in poverty, only 20 percent were enrolled. Figure 3-25 shows that the lower level of participation in prekindergarten programs by children living in poverty was consistent across all races with the exception of American Indian children. Regardless of race, there was a fairly substantial difference in prekindergarten enrollment between children living in poverty and those who were not.

Figure 3-25. Prekindergarten enrollment rates, by race and poverty: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference R02H18R.

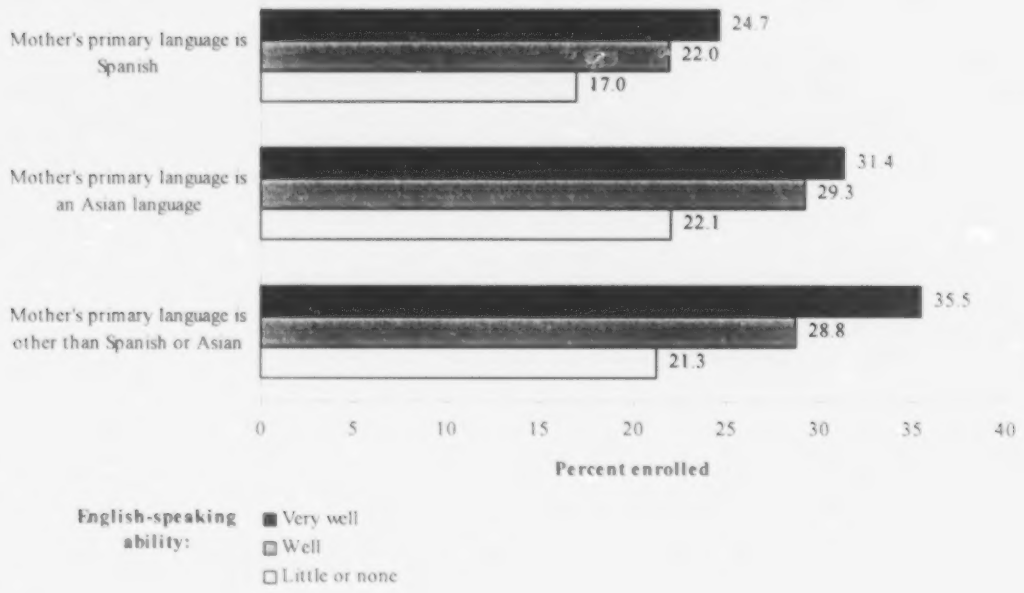
There was almost no discernible difference in the prekindergarten participation rates of white, black, and Asian children not living in poverty: the prekindergarten enrollment rate was 35 to 36 percent. Among white, black, and Asian children who were living in poverty, black children were a little more likely to attend prekindergarten. Hispanic children had the lowest prekindergarten enrollment rate among groups in poverty. With the exception of American Indians, all groups'

prekindergarten participation rates were 5 to 16 percentage points lower for those living in families with incomes below the poverty level than for those living in families with incomes above the poverty level.

Enrollment in Prekindergarten by Mother's Language Status

Participation in prekindergarten may be affected by language barriers, such as the English-speaking ability of the parents in the household or the household's linguistic isolation. The children of mothers who spoke "little or no" English were less likely to be enrolled in prekindergarten than those whose mothers spoke English "very well." See figure 3-26. (The prekindergarten enrollment rate for children whose mothers spoke only English was 30.2 percent.)

Figure 3-26. Prekindergarten enrollment rate for children of mothers whose primary language is not English: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01P06G.

Private School Enrollment Patterns

At the 1990 Census in the United States, there were about 4.6 million children enrolled in private school for grades kindergarten through 12. Since 38.6 million children were enrolled in public schools for those grades, enrollment in private schools accounts for about 12 percent of total school enrollment. (There were approximately 4.3 million children not enrolled.) (See tabulation X05C03G.)

Data collected by the 1990-91 Schools and Staffing Survey (SASS) counted almost 25,000 private schools in nine typology categories. Table 3-7 shows the number of schools and total number of children enrolled by private school type. The same year, there were almost 80,000 public schools. Based on these data, the average size of private schools was much smaller (fewer than 200 children) than public schools (about 500 children). (SASS data were collected a year later than the Census data so the number of children is naturally different.)

Table 3-7. Private schools by type and enrollments: 1990-91

School type	Number of schools	Number of children (in thousands)
Catholic		
Parochial	5,437	1,364
Diocesan	2,400	833
Private	894	359
Other religious		
Conservative Christian	4,045	547
Affiliated	4,262	632
Unaffiliated	3,169	290
Nonsectarian		
Regular	1,950	432
Special emphasis	1,700	158
Special education	833	60

Source: U.S. Department of Education, National Center for Education Statistics, *Schools and Staffing Survey, 1990-91*

Figure 3-27 illustrates the 1990 Census data for private school enrollments mapped to school geographical variations. (Private school enrollment data were collected where the student lived, not where the student attended school.) Overall 10 percent of children from 5 to 17 years old attended private schools. Three states had private school enrollment rates less than five percent; no state had a private school enrollment rate less than three percent. The three states with low private school enrollment rates have very low densities of population: Wyoming, Utah, and West Virginia.

Six states and the District of Columbia had rates of 15 percent or higher; four of those states are in the Northeast—Delaware, New Jersey, New York, and Pennsylvania. Nine states—Delaware, Illinois, Kentucky, Louisiana, Missouri, New Jersey, New York, Pennsylvania, and Wisconsin—had private school enrollment rates greater than 20 percent in 50 percent or more of their school districts.

Figure 3-27. Private school enrollment of 5- to 17-year-olds: 1990

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01G01.

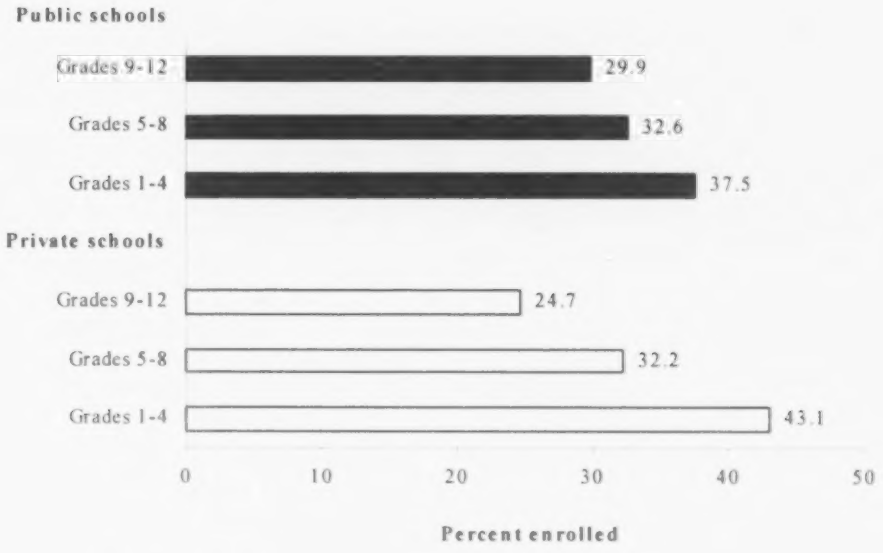
The following sections examine the background variables—such as race and ethnicity, educational attainment of parents, family structures, and family income—related to children who were enrolled in private school. Unless otherwise stated, these privately-educated school children were from 5 to 17 years old (the main ages of compulsory school attendance) during the decennial census.

Private School Enrollment by Grade Level and Sex

Figure 3-28 compares the grade distribution of children in grades 1 to 12 in private and public schools. The lower the grade level, the higher the percentage of children who were enrolled in private school. Seventy-five percent of the 4.0 million 5- to 17-year-old students in private schools were in grades 1-8, compared to 70 percent of the 37.2 million enrolled in the same grades in public schools.

There were almost equal proportions of male and female children enrolled in private schools as in public schools.

Figure 3-28. Enrollment of 5- to 17-year-olds in grades 1-4, 5-8, and 9-12 in public and private schools: 1990

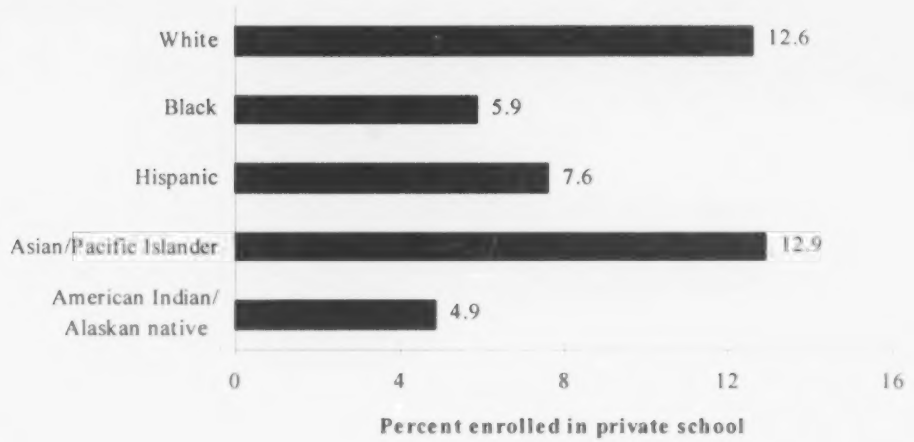


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01C01G.

Private School Enrollment by Race and Ethnicity

Private school participation rates showed marked variations by race. Among 5- to 17-year-olds, white and Asian children enrolled in private schools at about the same rate—12 to 13 percent. This level of participation was over twice that of black children. Hispanic children (8 percent) enrolled in private schools at a higher rate than black children (6 percent) or American Indian children (5 percent) (figure 3-29).

Figure 3-29. Percent enrolled in private school of all enrolled 5- to 17-year-olds, by race and ethnicity: 1990



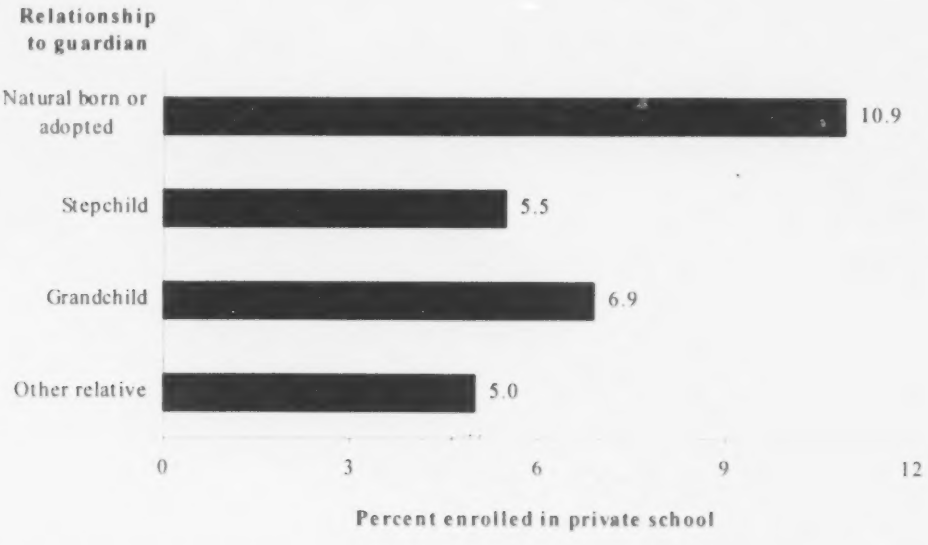
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference: X01C05G.

Eighty percent of the children who were enrolled in private schools were white, compared to about 68 percent in public schools. Black and American Indian children were the most under-represented groups in private schools. Black children comprised under 8 percent of privately enrolled children, compared to over 15 percent of publicly enrolled children (tabulation X01C05G).

Private School Enrollment by Relationship to Household Head and Race and Ethnicity

Stepchildren or children whose guardian was an "other relative" were enrolled in private school half as frequently as birth or adopted children about (6 percent versus 12 percent) (figure 3-30).

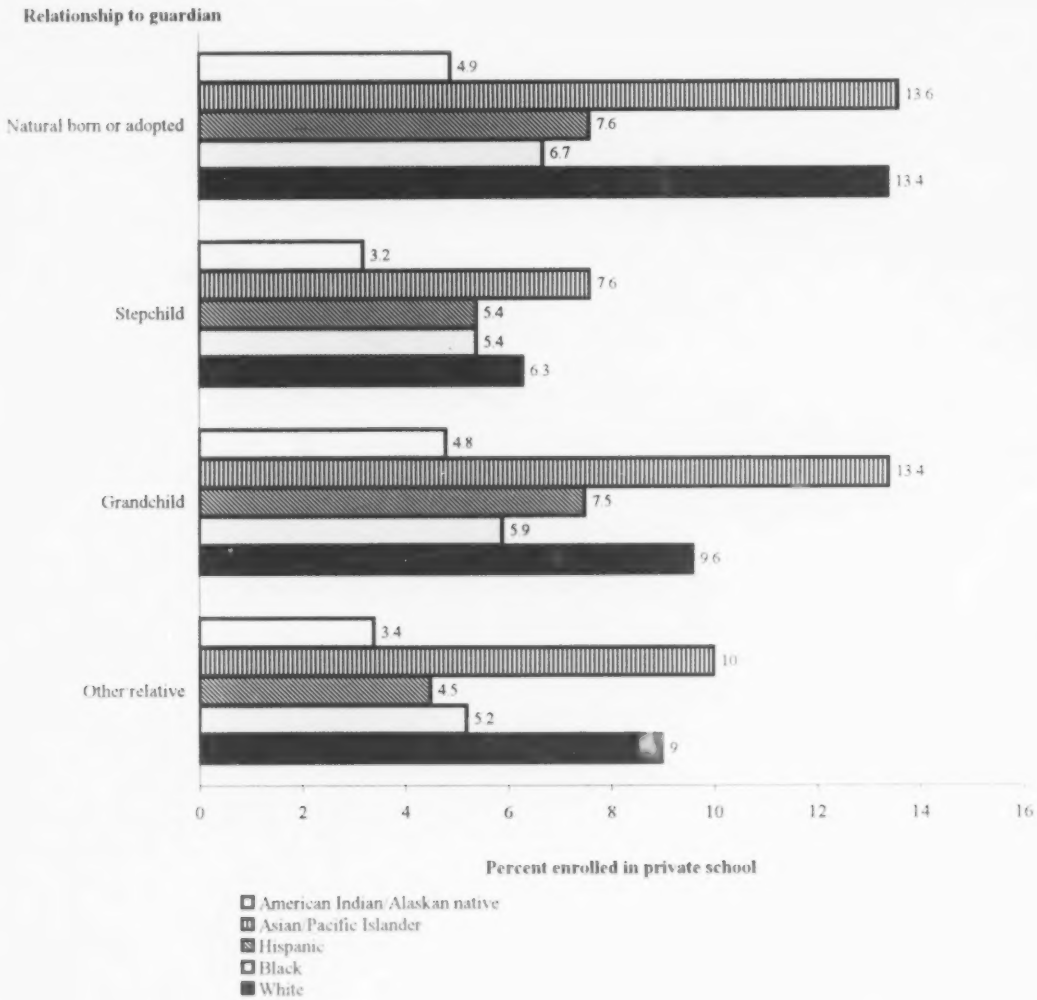
Figure 3-30. Percent enrolled in private school of all enrolled 5- to 17-year-olds in families, by relationship to guardian: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference: X01C06G.

Figure 3-31 examines private school enrollment rates on the basis of household relationship *and* race and ethnicity. White or Asian children living with relatives were more likely than all other children to be enrolled in private school.

Figure 3-31. Percent enrolled in private school of all children in grades 1-4, by race and ethnicity and relationship to guardian: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference R04C06R. Data are for children "assigned grades 1-4" (see appendix A).

Private School Enrollment by Child's Place of Birth

Eighty percent of private school children lived in the same state in which they were born, compared to about 75 percent of public school children. Four percent of the children enrolled in public schools were foreign-born, compared to only two percent in private schools (tabulation X01C07G).

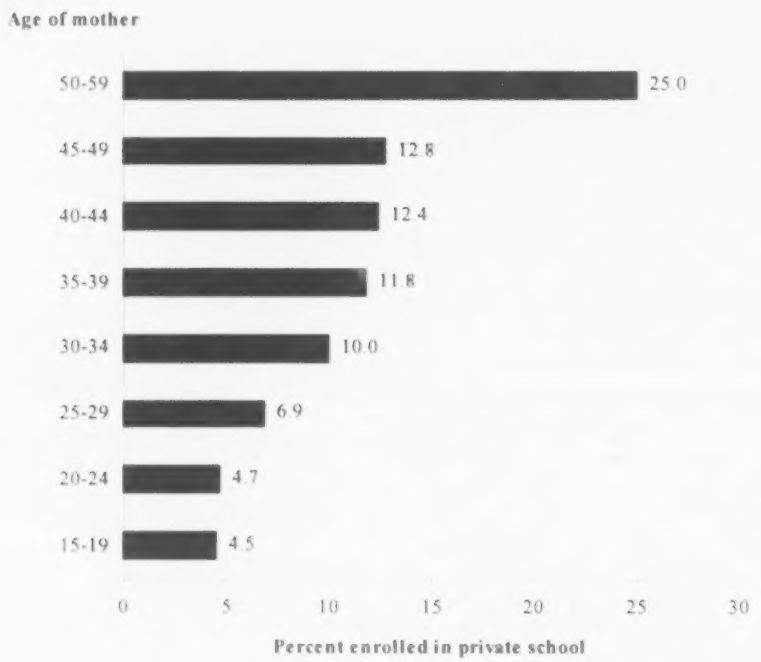
Private School Enrollment by Home-ownership Status of Parents

Children from home-owning families were twice as likely to be enrolled in private schools as children from nonhome-owning families (tabulation X01H28G).

Private School Enrollment by Mother's Current Age

The children in households with older mothers were more likely to attend private school than those with younger mothers. Children with mothers in the 40- to 54-year-old age group had an enrollment rate of 13 percent, twice as high as the rate for children whose mothers were from 20 to 24 years old (6 percent) (figure 3-32).

Figure 3-32. Percent enrolled in private school of all enrolled 5- to 17-year-olds, by age of mother: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference: X01P01G.

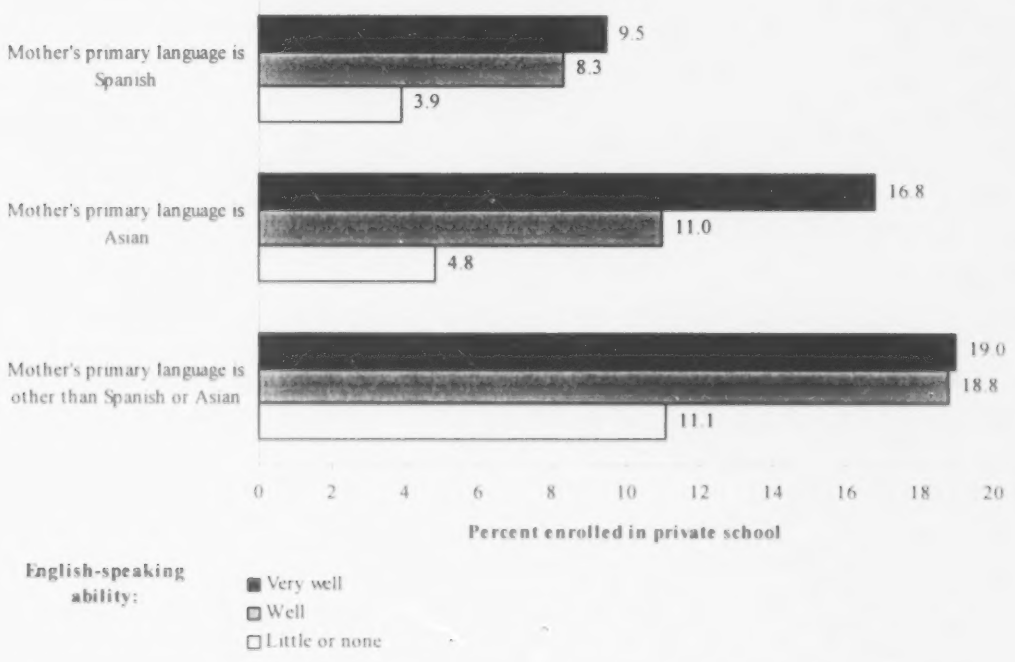
Private School Enrollment by Mother's Ability to Speak English

Among children living in households where the mother spoke a language other than English at home, private school enrollment rates varied depending on the level of English-speaking ability and the primary language.

In both private and public schools, almost 84 percent of children in households with mothers had mothers who spoke only English. Ten percent of children in private schools lived in households with mothers who spoke English "very well" (and spoke another language as well), compared to eight percent in public schools. Those children whose mothers spoke "little or no" English accounted for two percent of those in private schools versus about five percent for public schools (tabulation X01P06G).

Figure 3-33 illustrates the variability in private school enrollment rates by the mother's English speaking ability and by the primary language spoken. The children of Spanish-speaking mothers were somewhat less likely to be enrolled in private schools, regardless of how well their mothers spoke English. (For comparison, the private school enrollment rate for children whose mothers spoke only English was 11.4 percent.)

Figure 3-33. Percent enrolled in private school of all enrolled 5- to 17-year-olds, by English-speaking ability of their mothers: 1990

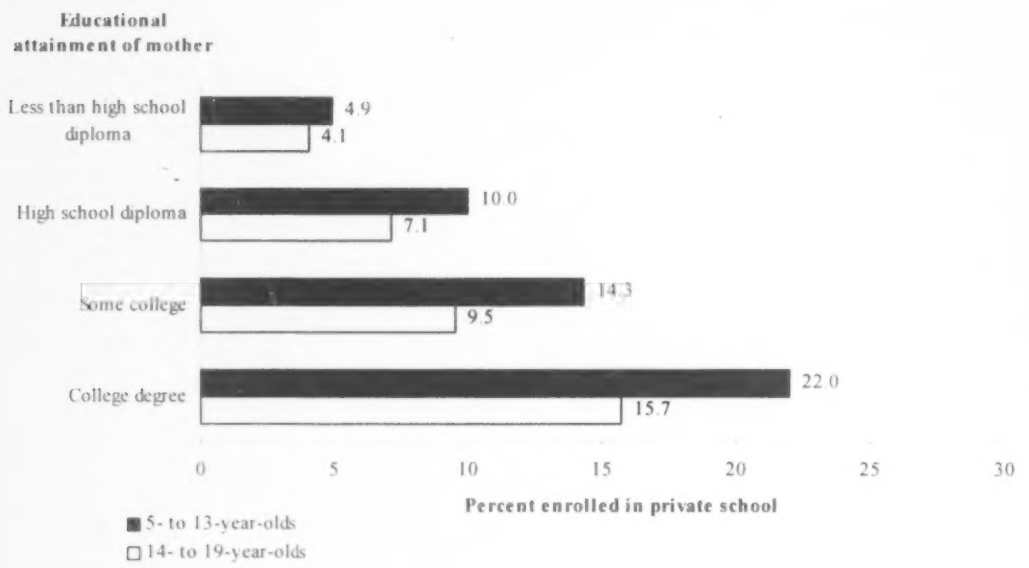


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference: X01P06G.

Private School Enrollment by Parents' Education and Race and Ethnicity

Private school enrollment rates were greater for children living in households where the parents had higher levels of educational attainment. Children living with a mother or father who had a college degree were four times more likely to be enrolled in private school than children living with a mother or father who did not have a high school diploma (roughly 20 percent versus 5 percent). Regardless of their age, children living with college graduate mothers were more than twice as likely to be enrolled in private schools as those living with mothers who had no college education (figure 3-34).

Figure 3-34. Percent enrolled in private school of all enrolled 5- to 17-year-olds, by educational attainment of mother in the household: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference: X01P25G.

In addition, higher private school enrollment rates were associated with higher *combined* educational attainment of the parents (tabulation X01P25G). For example, children in households where one parent had a college degree and the other had no high school diploma enrolled in private schools at a rate of about 12 percent. This figure was about 16 percent if one parent had a college degree and the other a high school diploma—and about 23 percent if both parents in the household were college graduates.

Considering family structure in addition to the educational attainment of parents, differences in private school enrollment rates were greater. For example, a child living with a mother only who had no high school diploma was eight times less likely to be enrolled in private school than a

child living in a two-parent household where both parents had college degrees (3 percent versus 23 percent).

Table 3-8 presents private school enrollment information for grades 1-4. White, black, Hispanic, and Asian children in these grades whose fathers or mothers were college graduates were almost equally likely to attend private school. With the exception of American Indian children, about one-in-five of those who had either a mother or father with a college degree attended private school. Among children whose parents' educational attainment was less than a college degree, blacks and American Indians were somewhat less likely to be enrolled in private school.

Table 3-8. Percent of children in grades 1 through 4 enrolled in private school, by education of parents with whom the child lives and by race: 1990

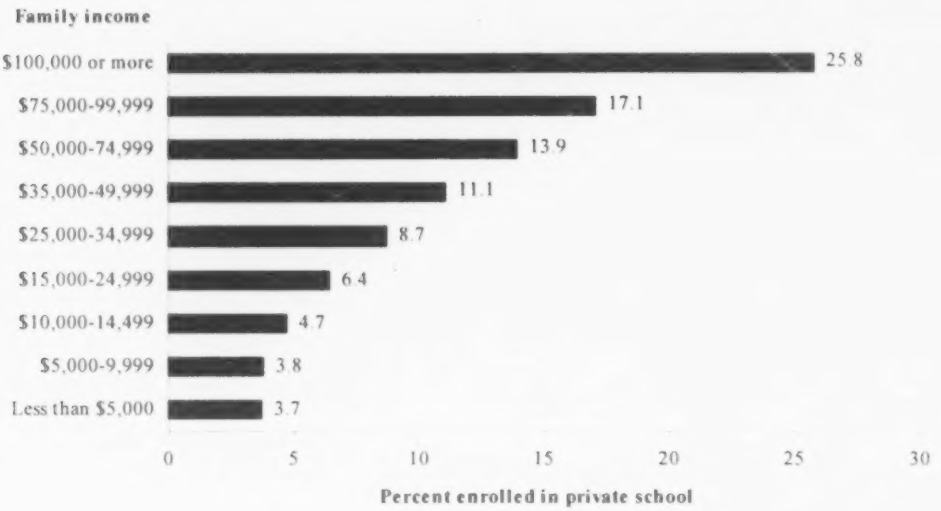
Educational attainment of parents	White	Black	Hispanic	Asian/ Pacific Islander	Amer. Indian/ Alaskan native
Father					
High school, no diploma	7	4	4	5	4
High school diploma	9	6	8	8	4
Some college, no degree	13	11	12	13	6
College degree	19	17	21	19	10
Mother					
High school, no diploma	6	2	3	4	3
High school diploma	10	4	8	9	4
Some college, no degree	13	9	14	14	6
College degree	19	18	21	21	11

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference: R04P17R.

Private School Enrollment by Family Income

Figure 3-35 illustrates the relationship of enrollment to family income. The higher the family income category, the higher percentage of children in that category enrolled in private school. Children from high income families ($50,000 or more) were more than three times as likely to be enrolled in private schools as children from low income families (under $25,000). However, although children from low income families were less likely to be enrolled in private schools, there was some participation in private schools at all family income levels.

Figure 3-35. Percent enrolled in private school of all enrolled 5- to 17-year-olds, by family income: 1990



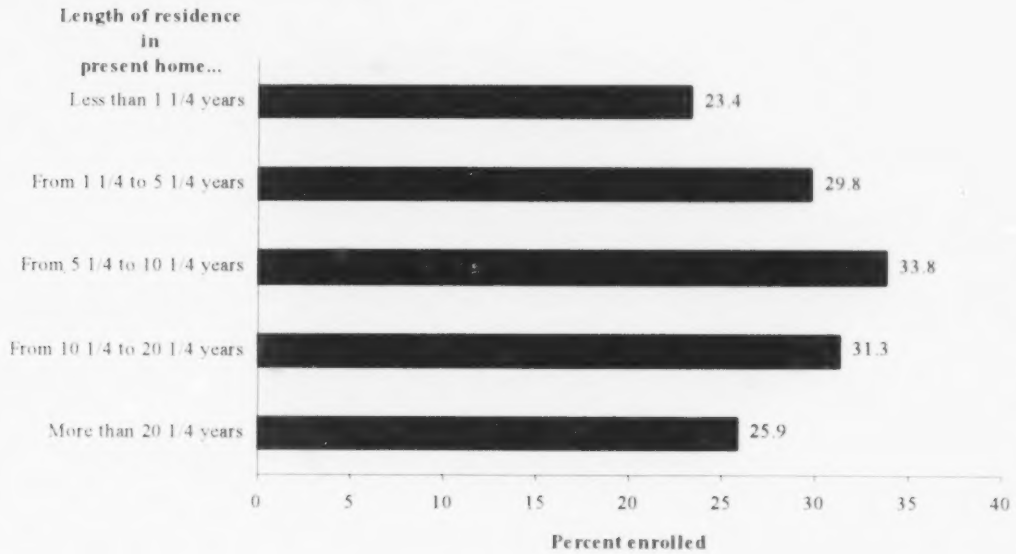
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference: X01H12G.

Of the 5- to 17-year-olds who attended private school, some 17 percent had family incomes under $25,000 and over 20 percent had family incomes of $75,000 or more. In contrast, of the 5- to 17-year-olds who attended public school, over 35 percent had family incomes under $25,000 and less than 10 percent had family incomes of $75,000 or more (tabulation X01H12G).

Private School Enrollment by Family Mobility

Recent movers—defined as those who had moved in the 15 months prior to April 1, 1990—had lower private school enrollment rates than families who had lived in their homes for longer periods. Generally, the longer a family had lived in its current home, the more likely the children in the home would attend private schools.

Figure 3-36. Percent enrolled in private school of all enrolled 5- to 17-year-olds, by year family moved into present home: 1990

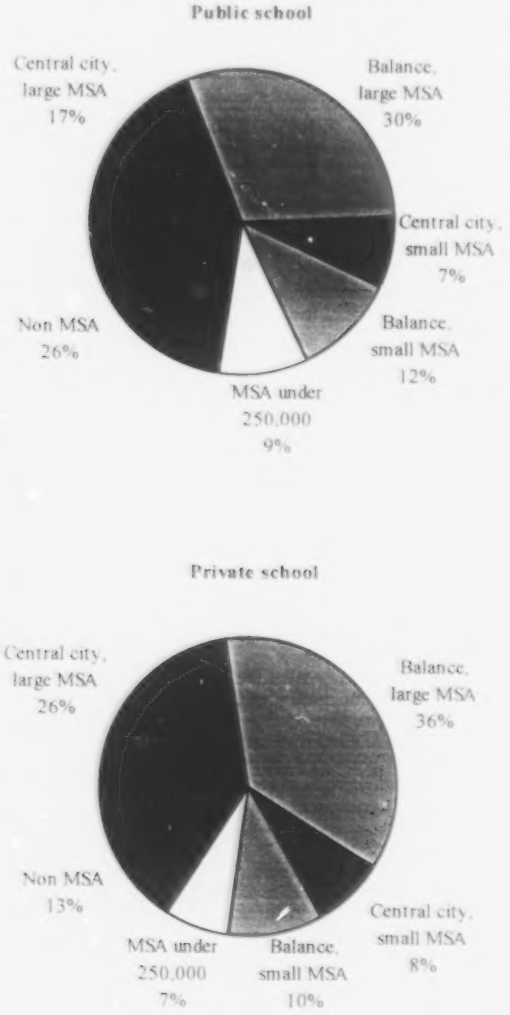


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H29G.

Private School Enrollment by Household Location

About 62 percent of children in private schools lived in large Metropolitan Statistical Areas (one million population or more). This compared to about 47 percent of public school children. By contrast, only 13 percent of private school children were from nonmetropolitan areas, compared with 26 percent of public school children (figure 3-37).

Figure 3-37. Distribution of 5- to 17-year-olds enrolled in public and private school, by area of residence: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference X01H25G.

Chapter 4. School District Profile

This chapter provides a profile of this country's nearly 15,000 school districts. To build the profile, this chapter examines the SDAB data set from five different perspectives to learn what the data can tell us about:

- School Districts,
- Prekindergarten Enrollment by School District Characteristics,
- Public Prekindergarten Enrollment by School District Characteristics,
- Private School Enrollment by School District Characteristics, and
- Comparison of Enrollment in Private and Public Schools by School District Characteristics.

The populations comprising the school districts varied by the same kind of social, demographic, and economic conditions considered in the last chapter. Some of these factors have been linked in topical educational research to schools, districts, and states with higher dropout rates.

This chapter differs from the preceding in that its focus is on the school district and not on the population of school children overall. In the last chapter, the statistics showed numbers of children. In this chapter, the focus is primarily on numbers of school districts and of children in those school districts. Whether counting school districts or school-age children, many of the characteristics considered are the same. For example, the last chapter looked at children by income of the child's family. This chapter looks at school districts by the median family income of the district. The last chapter showed data on children of minority race and ethnicity. This chapter shows school districts by the districts' percentages of ethnic and racial minorities.

Therefore, this chapter provides a basis for school administrators, educators, and others who are interested in comparing their local experience with national patterns. As indicated previously, state and school district data are summarized in the SDAB, which is available to the public.

General Characteristics of School Districts

In the United States, there are about 15,000 public school districts of three different types: elementary, secondary, and consolidated (both elementary and secondary). The trend has been toward consolidated and away from separate elementary and secondary school district systems. By 1990 three-fourths of all school districts were consolidated districts, educating more than 90 percent of all children enrolled in public school (table 4-1). Twenty-three states had only consolidated school districts.

Table 4-1. Type of school district and enrollment: 1990

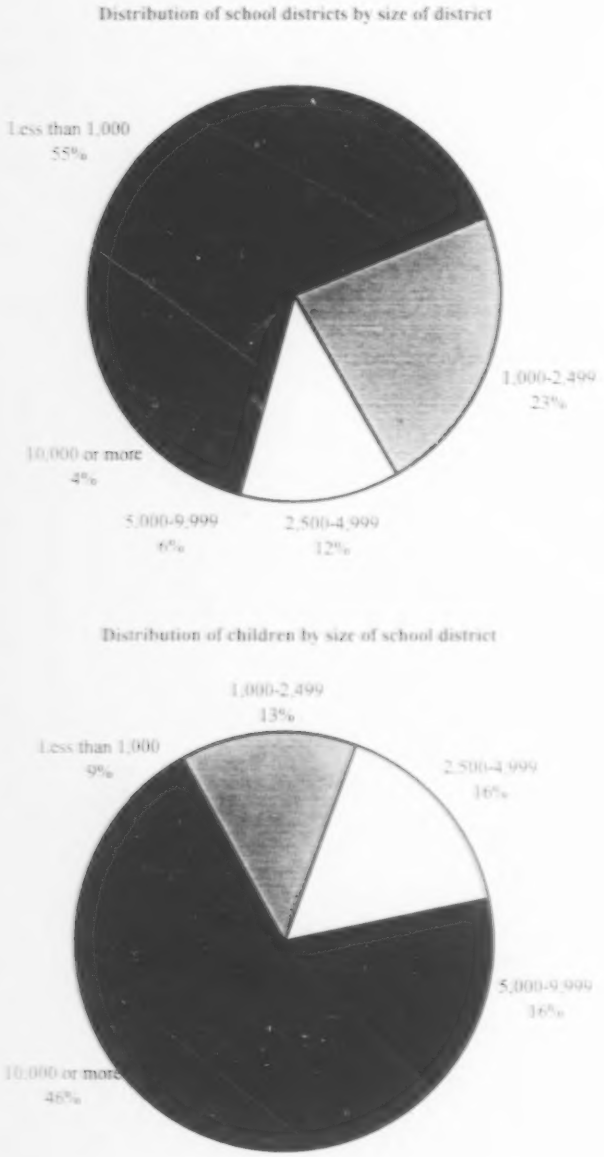
Type of school districts	Number of districts	Percent	Number of children enrolled (public) (in thousands)	Percent
Total Districts	14,897	100	39,876	100
Elementary	3,091	21	2,201	6
Secondary	561	4	827	2
Consolidated	11,245	75	36,848	92

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references T02D01 and T01C02G

Most school districts (about three-fourths) were small, having fewer than 2,500 students (figure 4-1). More than half served fewer than 1,000 students. Only 10 percent had 5,000 or more students. However, reflecting the urban concentrations of our population, most students were enrolled in larger districts. Almost half (46 percent) were enrolled in districts with 10,000 or more students (figure 4-1).

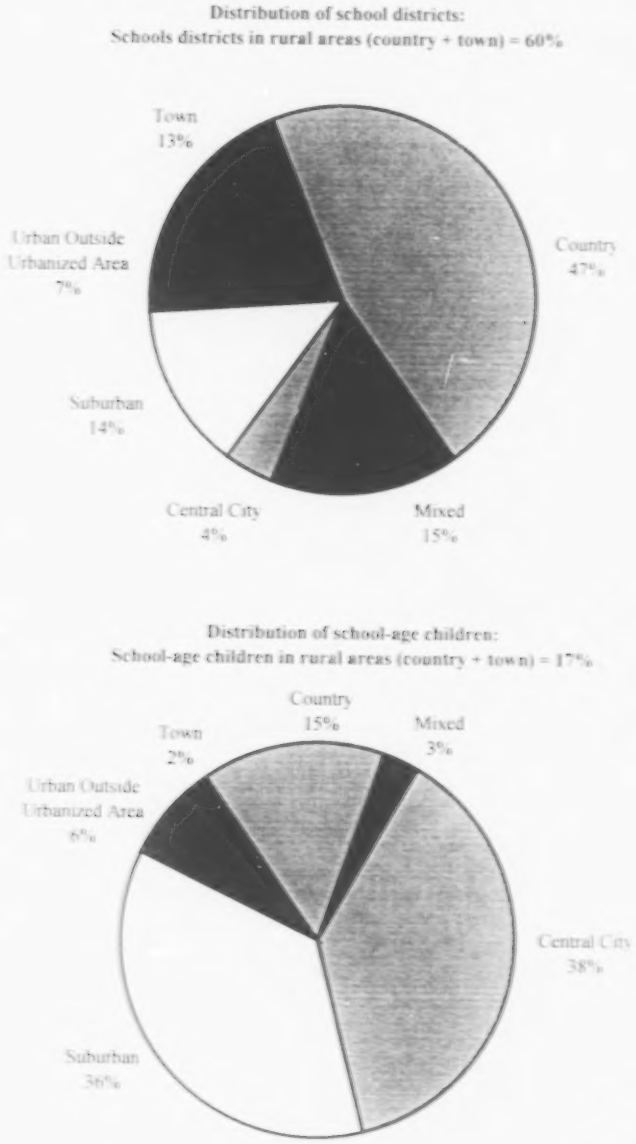
Similarly, although most school districts are rural, most children were educated in urban school districts. Twenty-five percent of school districts were located in urban areas, and they enrolled 80 percent of all students. In contrast, nearly 60 percent of school districts were located in rural areas, and they enrolled only 17 percent of school-age children (figure 4-2). (The category "mixed" accounted for 15 percent of school districts but only 3 percent of children.)

Figure 4-1. Distribution of school districts by size of district and distribution of children by size of district: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references T04G01 and T03G01

Figure 4-2. Distribution of school districts and of children, by type of community: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation references G28D04 and G27C02G.

Characteristics of Minority-Predominant School Districts

There were 1,279 minority-predominant school districts (9 percent)—those in which white children constituted less than half of the total school population. One-fourth of children enrolled in public schools lived in minority-predominant school districts.

The percentage of children in minority-predominant school districts varied widely by state (figure 4-3). More than half of school-age children in Hawaii, New Mexico, and the District of Columbia lived in minority-predominant school districts. Other states with high percentages (25 to 49.9 percent) of children living in minority-predominant school districts are Mississippi, New York, Texas, South Carolina, Georgia, Maryland, Illinois, Arizona, Alabama, and New Jersey. Fewer than one percent lived in minority-predominant school districts in Utah, Oregon, Nebraska, Minnesota, Idaho, Maine, West Virginia, Vermont, New Hampshire, Nevada, Kentucky, Iowa, and Delaware.

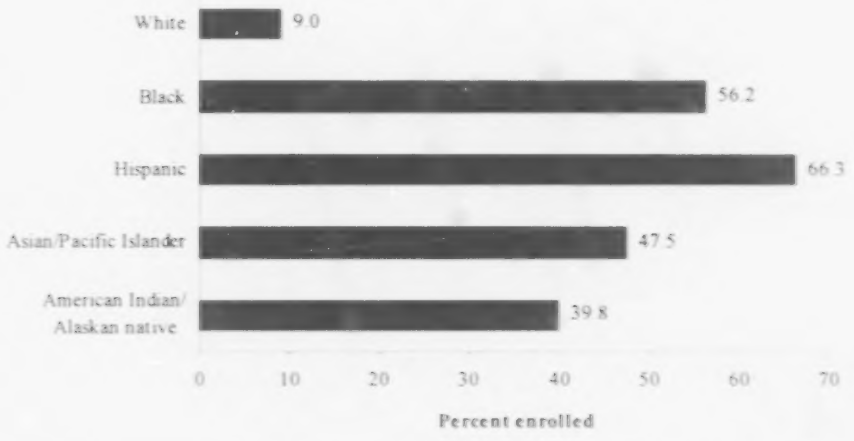
Figure 4-3. Percentage of children living in minority-predominant school districts: 1990

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference R07G01

Sixty percent of all minority children in public schools were enrolled in minority-predominant districts. These districts educated 9.9 million children in 1990—26 percent of all children in the United States. This includes 3.2 million Hispanic children, 3.5 million black children, 590,000 Asian and Pacific Islanders, 169,000 American Indians, and 2.4 million white children.

More than half of enrolled black children (56 percent) were enrolled in minority-predominant school districts (figure 4-4); over one-fourth (29 percent) were enrolled in school districts where black students were in the majority (tabulation R10C03R). Similarly, two-thirds of Hispanic children were enrolled in minority-predominant districts (figure 4-4); nearly one-third (31 percent) were enrolled in districts where Hispanic students were the majority (tabulation R12C03R). Almost half of Hispanic children compared to one-third of black children attended public schools in districts with more than 70 percent minority populations.

Figure 4-4. Percentage of each race/ethnicity enrolled in public schools in minority-predominant school districts: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference R07P02G.

There were other notable features of minority-predominant school districts. For example, these districts were much more likely to be located in urban areas. Almost two-thirds were central city districts, reflecting the general geographic distribution of the minority population. Almost 30 percent of children in minority-predominant districts lived in families with incomes below the poverty level and about twenty percent lived in a family receiving public assistance. However, despite low family incomes, 29 percent of 3- and 4-year-olds in minority-predominant districts were enrolled in prekindergarten; this was about the same as the national average.

Other Characteristics of School Districts

Table 4-2 summarizes other key census demographic and economic data for school districts which illustrate information in the SDAB. Such data provide a national picture of how many children live in districts with selected characteristics of interest to school administrators, such as high dropout rates or extreme levels of poverty.

For example, there were almost ten million children living in school districts with high school dropout rates of 20 percent or more. (Dropouts in this section refers to children 16 to 19 years old who were not high school graduates and not enrolled in school according to the 1990 Census.) There were more than 5 million children living with parents who had no high school diploma. There were more than 1,400 districts (inclusive of more than 4.1 million children) where more than one-third of families had incomes below the poverty level.

Almost all school districts (elementary and consolidated) offered kindergarten classes, but only 24 percent of those districts had public prekindergarten programs. About 3.3 million children assigned grade "PK" lived in districts with such programs. (See "Grade in School," appendix A.)

Table 4-2. School district profiles: 1990

Characteristics of school district population	Number of districts	Number of children (in thousands)
Dropout rate of 20% or more of 16- to 19-year-olds	3,285	9,889
With prekindergarten	3,435	3,335
Median family income:		
$50,000 or more	1,263	5,818
Less than $20,000	1,165	1,499
Districts with 35% or more children:		
With family income below poverty level	1,454	4,180
Foreign born	345	5,525
Both parents in household with college degree	1,349	5,628
Neither parent in household has high school diploma	1,051	5,388

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references: dropout P11G01, prekindergarten P01G01, family income E02G01, poverty level E04G01, foreign born D14G01, college degree D10G01, high school diploma D12G01.

Prekindergarten Enrollment by School District Characteristics

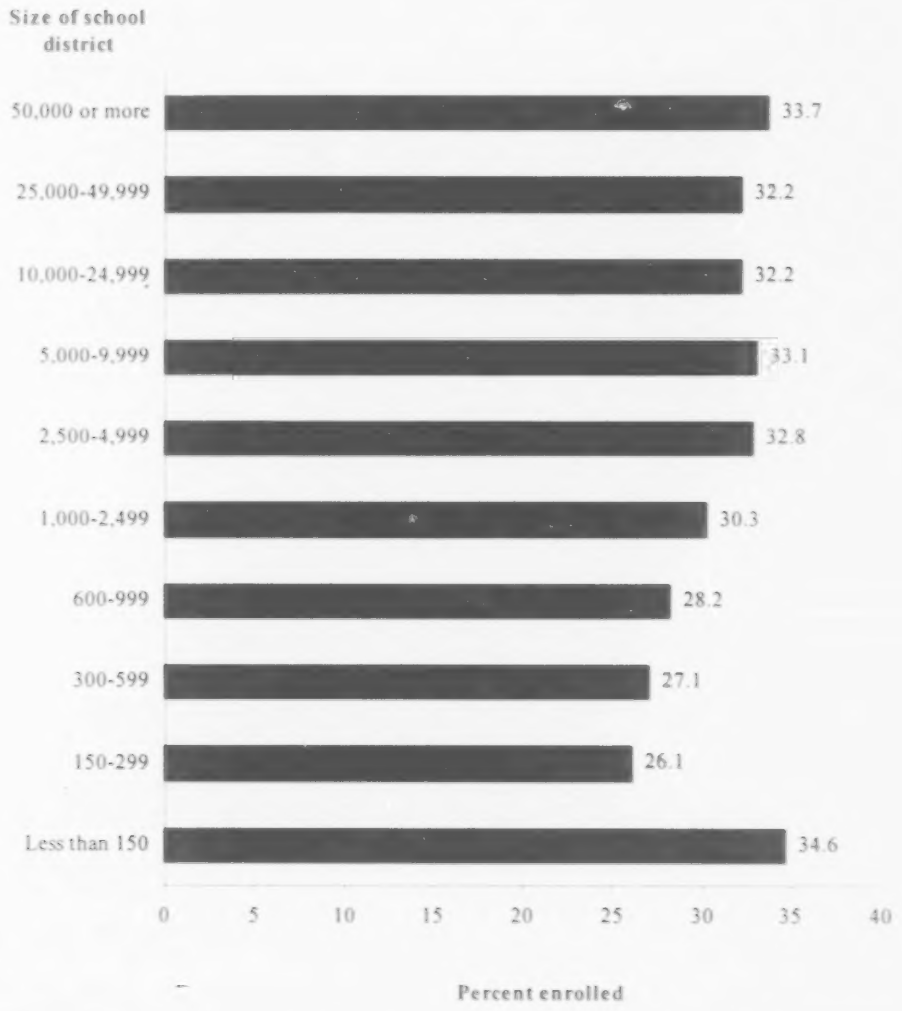
Overall, about 32 percent of the approximately 7 million 3- and 4-year-old children were enrolled in prekindergarten. About 46 percent of school districts had prekindergarten enrollment rates less than 20 percent; only 13 percent of school districts enrolled over 40 percent of this age group.

In this section, the characteristics of school districts with low prekindergarten enrollment rates are compared to those with higher enrollment rates on variables such as size of school district, affluence, and parents' education. For the purposes of this section, given the national prekindergarten enrollment rate of 32 percent, low enrollment is defined as less than 20 percent, middle enrollment is defined as 20 percent to 40 percent, and higher enrollment is defined as more than 40 percent.

Prekindergarten Enrollment by Size of School District

Prekindergarten enrollment rates did not vary significantly among school districts with 2,500 or more students. In the smaller school districts (fewer than 2,500 school-age children), rates were somewhat lower than the overall rate of 32 percent. Enrollments ranged from 26 percent to 30 percent in these districts, with the exception of the smallest districts where enrollment was somewhat greater than the national percentage (34.6 percent).

Figure 4-5. Enrollment of 3- and 4-year-olds in prekindergarten by size of school districts: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference T03C02G.

Prekindergarten Enrollment by Community Type

Suburban school districts had higher prekindergarten enrollment rates than those in town and country areas. Only 9 percent of suburban districts had prekindergarten enrollment rates lower than 20 percent. However, of the school districts classified as "town" or "country" (i.e., rural), about 60 and 55 percent respectively had low prekindergarten enrollment rates (less than 20 percent). Correspondingly, 43 percent of suburban school districts had high enrollment rates, enrolling more than 40 percent of the 3- and 4-year-olds in the district, compared to 18 percent of country school districts and 12 percent of town school districts. Approximately 70 percent of central city districts had "medium" prekindergarten enrollment rates (from 20 to 40 percent).

Table 4-3. Prekindergarten enrollment, by type of community: 1990

	Distribution of percent of school districts in...			
	Central city	Suburban	Town	Country
Low enrollment (less than 20%)	13.1	8.7	59.8	54.8
Medium enrollment (20 to 40%)	73.4	48.7	28.7	27.1
Higher enrollment (more than 40%)	15.5	42.6	11.5	18.1

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference G28D24

Prekindergarten Enrollment by District Family Income

The higher the median family income in the school district's community, the more likely it was to have a higher prekindergarten enrollment. Of school districts with median family incomes of $50,000 or more, less than four percent had low enrollments, while nearly three-fourths had higher prekindergarten enrollment rates (over 40 percent). In contrast, among school districts with median family incomes lower than $25,000, two-thirds had low prekindergarten enrollment rates (less than 20 percent). Fewer than 10 percent of districts with median family incomes under $50,000 had higher prekindergarten enrollments.

Table 4-4. Prekindergarten enrollment, by districts' median household income: 1990

	Distribution of percent of school districts in districts with median incomes of...		
	Less than $25,000	$25,000 - $50,000	$50,000 or more
Low enrollment (less than 20%)	65.5	43.4	3.6
Medium enrollment (20 to 40%)	28.1	47.8	26.5
Higher enrollment (40% or more)	6.4	8.8	69.8

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference E04D24.

Prekindergarten Enrollment by District Incidence of Poverty

Lower prekindergarten enrollment rates are associated with poverty. Among school districts where the incidence of children in poverty was high (more than 25 percent), 41 percent had low enrollment rates and only 7 percent had high enrollment rates. In contrast, where the incidence of poverty was low (five percent or lower), less than 25 percent of school districts had low enrollment rates and 58 percent had high enrollment rates.

Table 4-5. Prekindergarten enrollment, by districts' percent living below poverty threshold: 1990

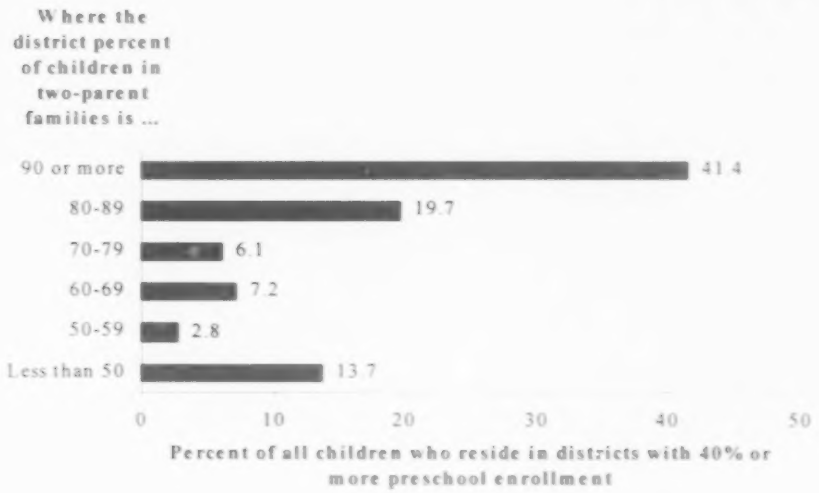
Children in Poverty	Low Enrollment (Less than 20%)	Higher Enrollment (More than 40%)
Less than 5%	25	58
25% or more	41	7

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference F01D02.

Prekindergarten Enrollment by Family Structure

Districts with a higher percentage of children in two-parent families tend to have higher prekindergarten enrollment rates. Among districts where most children were in two-parent families, about 40 percent of the children were in districts with higher prekindergarten enrollment. On the other hand, in districts where less than 50 percent of the children were in two-parent families, roughly 13 percent of the children were in districts with higher prekindergarten rates (figure 4-6).

Figure 4-6. Higher prekindergarten enrollment rates in districts, with higher rates of two-parent families: 1990



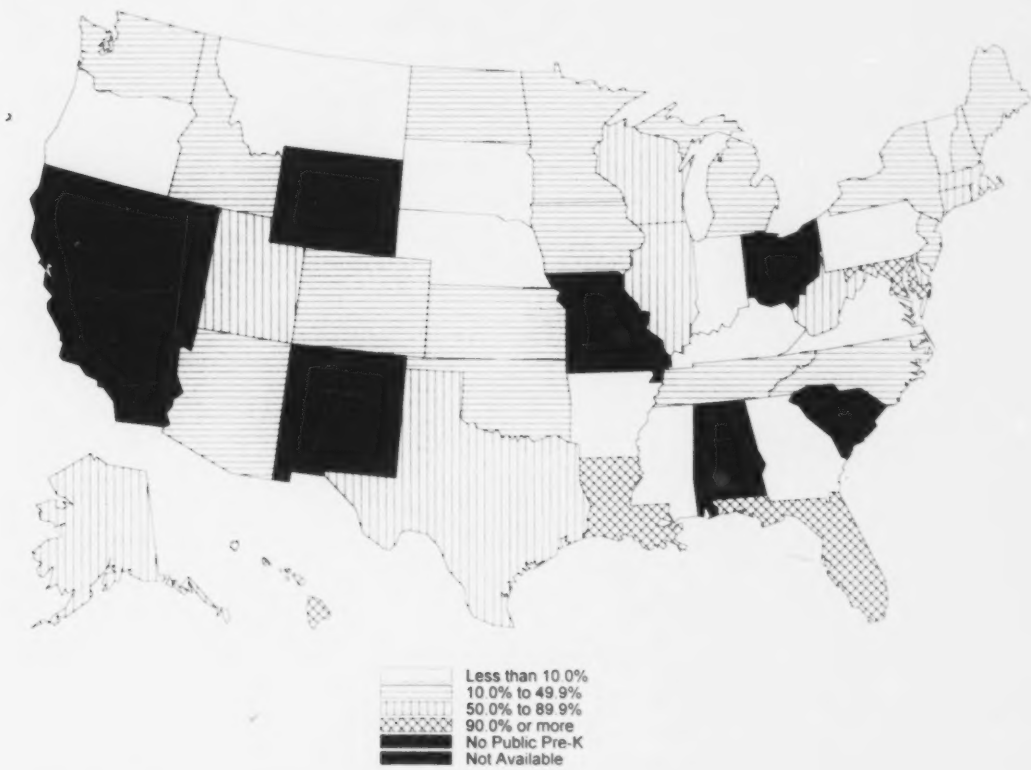
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation.* SDAB tabulation reference D01D24.

Public Prekindergarten Availability and School District Characteristics

Nationally, only 3,400—about one-fourth of the nearly 15,000 school districts—provided public prekindergarten programs.[1] In 20 states and the District of Columbia, more than 25 percent of school districts offered prekindergarten. Seven states did not provide public prekindergarten programs in any of their school districts: Alabama, Missouri, Nevada, New Mexico, Ohio, South Carolina, and Wyoming (figure 4-7).

This section analyzes the availability of public prekindergarten based on school district characteristics.

Figure 4-7. Percentage of school districts in each state offering public prekindergarten: 1990



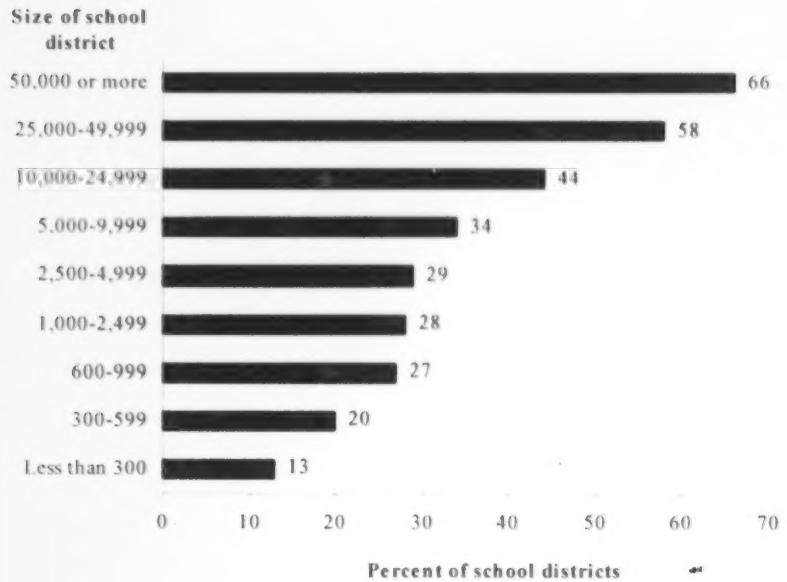
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*, SDAB tabulation reference P02G01.

[1] Of the almost 7.8 million children the SDAB has assigned grade "PK" (prekindergarten), about 3.3 million (roughly 43 percent) live in school districts that provide public prekindergarten.

Public Prekindergarten Availability by Size and Community Type

Large school districts were about two-and-a-half times more likely to provide public prekindergarten programs than small school districts (figure 4-8).

Figure 4-8. School districts with public prekindergarten, by size of school district: 1990



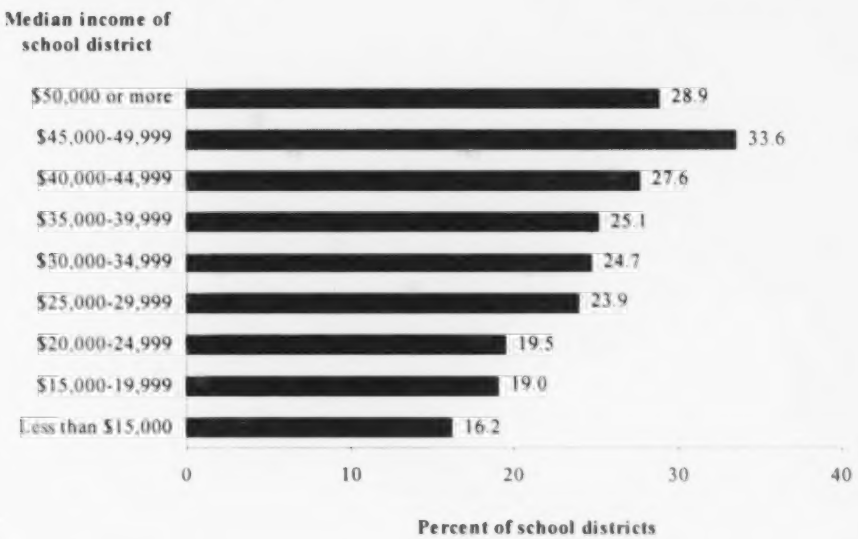
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference P02D02.

Forty-nine percent of the largest school districts (all those with more than 10,000 students) offered prekindergarten programs, compared to only 18 percent of the smallest school districts (all with fewer than 1,000) (tabulation P02D02).

Public Prekindergarten Availability by District Family Income

In general, the higher the median income of the community, the more likely that the school district offered prekindergarten (figure 4-9). For example, in districts with median family incomes of $40,000 or more, the proportion of school districts providing public prekindergarten was higher than the national average of 24 percent. In contrast, among of school districts with median family incomes under $15,000, only 16 percent provided public prekindergarten programs.

Figure 4-9. School districts with public prekindergarten programs, by districts' median family income: 1990



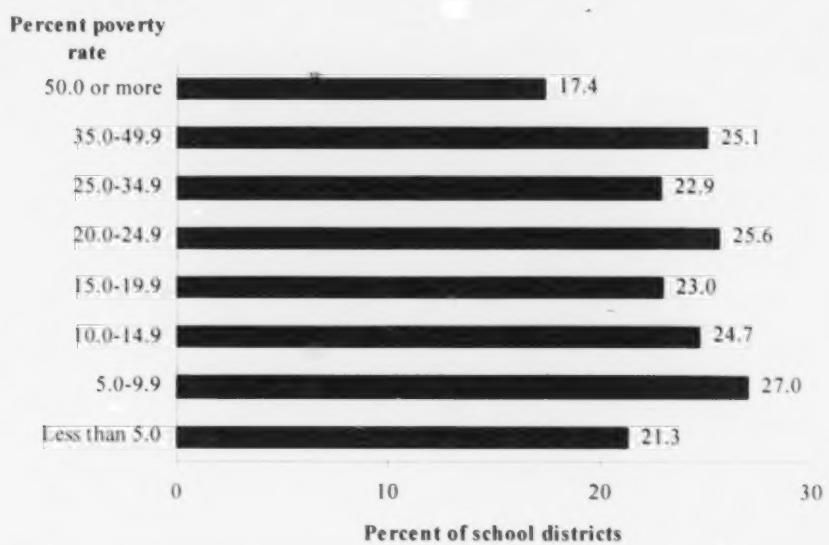
Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference P02D17.

Public Prekindergarten Availability by Unemployment and Poverty

Both in school districts with low unemployment (less than 6 percent) and high unemployment (more than 10 percent), about 20 percent provided public prekindergarten (tabulation P02D15).

Seventeen percent of school districts with half or more families of school-age children living in poverty provided prekindergarten programs (figure 4-10). This compared to a national average of 24 percent and about 30 percent in districts with median incomes greater than $45,000.

Figure 4-10. School districts with public prekindergarten, by poverty levels: 1990

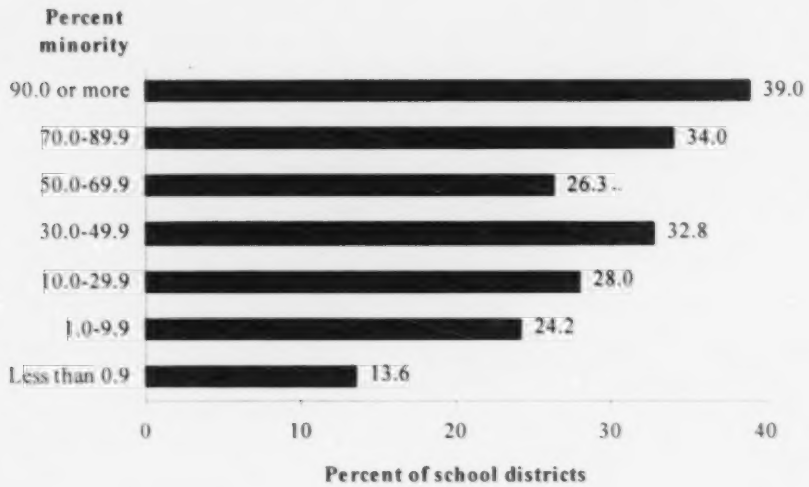


Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference P02D15.

Public Prekindergarten Availability by District Minority Populations

School districts with larger minority populations were more likely to provide prekindergarten programs (figure 4-11).

Figure 4-11. School districts with public prekindergarten programs, by minority school-age population: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference P02D14.

Thirty-nine percent of school districts where minorities comprised 90 percent or more of the school-age population offered prekindergarten programs. On the other hand, only 20 percent provided prekindergarten opportunities when minorities comprised 10 percent or less of the school-age population (tabulation P02D14).

Private School Enrollment Rates by School District Characteristics: Using the SDAB

This section provides a detailed example of how the SDAB can be used to address a specific interest. Specifically, it examines private school enrollment rates to determine how they varied according to the characteristics of school districts. Seventeen such characteristics are displayed in table 4-6 (on pages 4-24 and 4-25), with enrollment data for children in grades 1 through 12. For this population of children, the overall private school enrollment rate was 9.8 percent. Each school district characteristic has three categories corresponding to low, medium, and high values of the characteristic. For example, "size of school district" has three size categories: small (fewer than 1,000), medium (1,000 to 10,000) and large (more than 10,000).

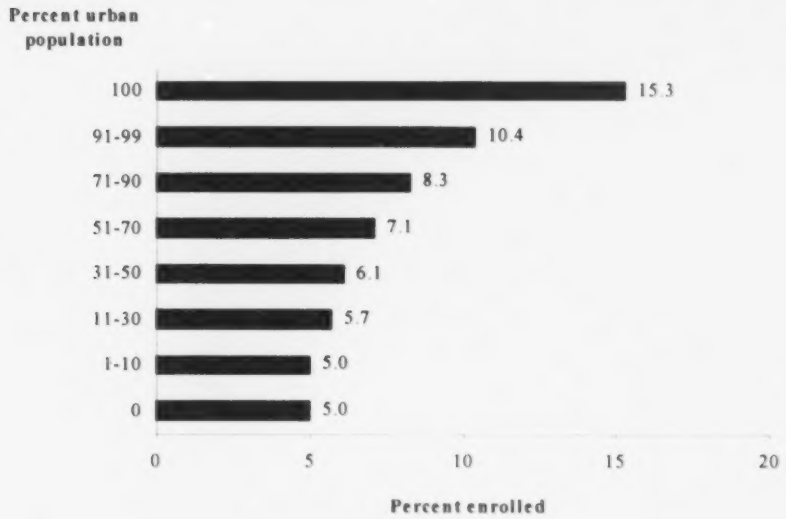
For each characteristic, the data in the table show the private school enrollment rate of children residing in school districts with this characteristic. For example, children in grades 1 through 12 residing in rural school districts with a population density of more than 50 persons per square mile had a private school enrollment rate of six percent. Rural school districts in which the population density was less than one person per square mile had an enrollment rate of 3 percent in private schools.

Private school enrollment rates appeared to be associated with the following school district characteristics, detailed in table 4-6 on pages 4-24 and 4-25.

- Size of the school district,
- Population density (for rural school districts),
- Size of the urban area (for urban school districts),
- Percent minority,
- College educated parents of school-age children,
- Median family income, and
- Foreign born parents of school-age children.

In districts that were almost entirely urban, private school enrollment was about three times higher than the rate in districts where less than 10 percent of the population was in urban areas (figure 4-12). Among districts in larger urban areas, private school enrollment was higher (figure 4-13). In areas with populations greater than 2.5 million, the percentage of children enrolled in private school (13.7 percent) was about twice as high as the percentage in urban areas of less than 100,000.

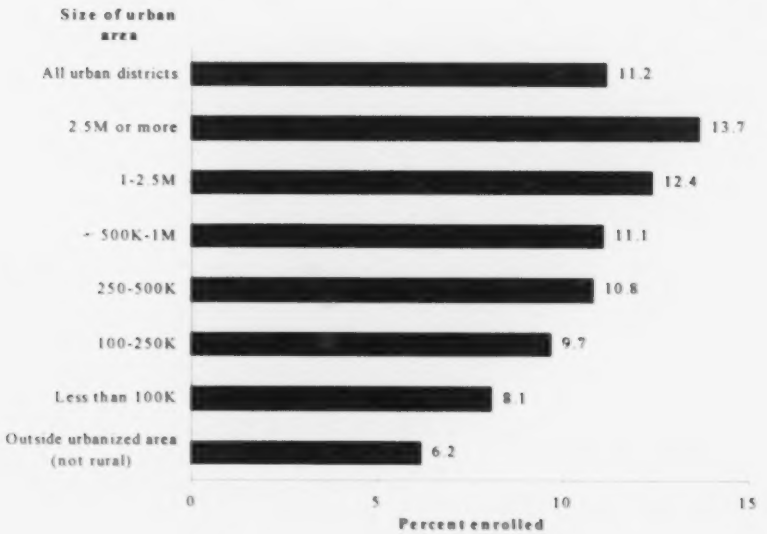
Figure 4-12. Enrollment of 5- to 19-year-olds in private school, by percent of urban population in school district: 1990



Note: The percentage of 5- to 19-year-olds enrolled in private school over all districts was 9.8 percent.

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference G01C02G.

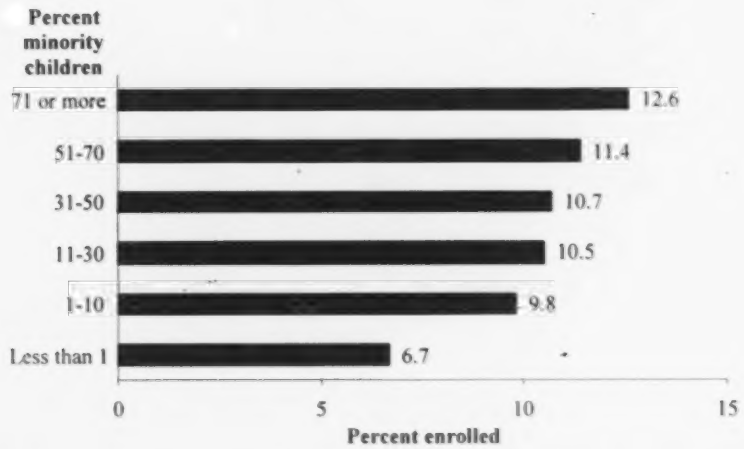
Figure 4-13. Enrollment of 5- to 19-year-olds in private school, by size of urban area: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference X01H24G.

Private school enrollment rates were higher in school districts with higher proportions of minority children (figure 4-14) and linguistically isolated children (table 4-6). These characteristics are associated with urbanicity, and the enrollment data probably reflected this association. In school districts where the proportion of female-headed households was high, the private school enrollment rate was almost twice as high as that found in school districts where the proportion of such families was low. Clearly there were a large number of factors that affected private school enrollment rates. See, for example, chapter 3, Private School Enrollment Patterns, pages 36-48.

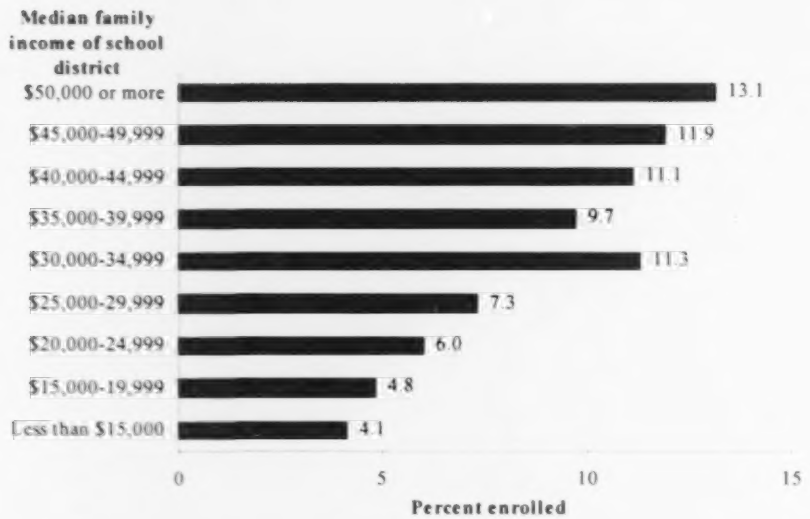
Figure 4-14. Private school enrollment, by districts' minority percentage: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference R07C02G.

Comparing districts with median family incomes of $40,000 or more to those with median incomes of less than $25,000, the more affluent districts had private school enrollment rates about twice as high (figure 4-15).

Figure 4-15. Enrollment of 5- to 19-year-olds in private school, by school district median family income: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference E02C02G.

Other school district characteristics with an economic dimension did not appear to have an association with private school enrollment rates:

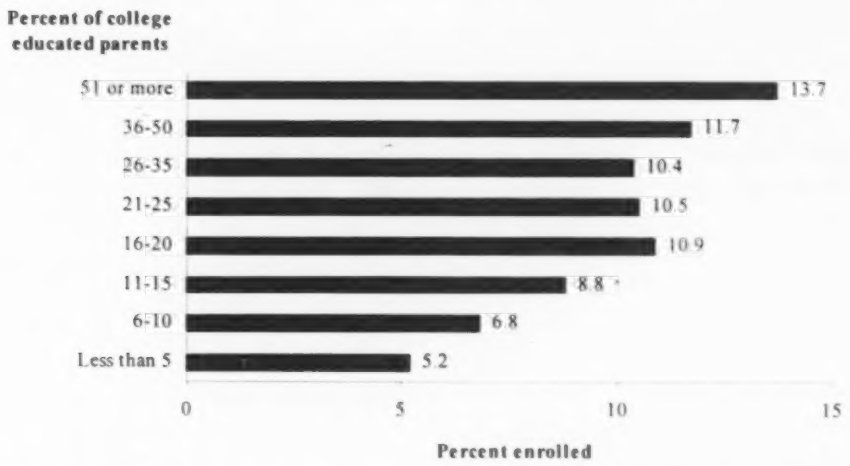
- Percentage of school-age children living with parents who are not high school graduates,
- Percent of children in poverty,
- Percentage of children with one or more parents unemployed,
- Student-teacher ratios,
- Instructional expenditure per pupil, and
- Federal transfers per pupil.

School District Characteristics and Higher Private School Enrollment

The profile of a school district in which there are relatively larger percentages of students enrolled in private schools would probably have the following features: the district would be a large, consolidated school district in a large urban area. These same conditions are associated with higher concentrations of female-headed households and minority and linguistically isolated children. It would also likely be a school district that is marginally more affluent (figure 4-15) and has more college educated parents (figure 4-16) than districts in which relatively fewer students are enrolled in private school.

Private school enrollment does not appear to be related to school district levels of resource provision. For instance, three indicators of resource provision—student-teacher ratios, instructional expense per pupil, and federal transfers per pupil—show few differences between the private and public sectors in the distribution of children.

Figure 4-16. Enrollment of 5- to 19-year-olds in private school, by percent of college educated parents in school district: 1990



Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference D10C02G.

Table 4-6. Percent of students in grades 1-12 enrolled in private school, by school district characteristic: 1990

Characteristics of school districts (SDs)	Percent enrolled in private school
All students	9.8
Size of school district	
Less than 1,000	7.2
Between 1,000 and 10,000	8.5
More than 10,000	11.5
Population per square mile—rural SDs	
Less than 1	3.0
Between 1 and 10	4.7
50 or more	6.0
Urban population as a percent of total	
Non-urban	5.2
Up to 50 percent	7.4
50 percent or more	12.6
Size of urban population	
Less than 100,000	7.9
100,000 to 1 million	10.4
More than 1 million	13.8
Children in two-parent families	
Less than 70 percent	13.1
70-90 percent	8.3
More than 90 percent	10.9
Children in female-headed families	
Less than 10 percent	9.4
10-35 percent	8.8
More than 35 percent	16.6
Minority children	
Less than 1 percent	6.4
1-30 percent	8.7
More than 30 percent	11.5
Linguistically isolated children	
Less than 1 percent	8.2
1-10 percent	10.8
More than 10 percent	13.0
College-educated parents as percent of total	
Less than 10 percent	6.6
10-35 percent	10.1
More than 35 percent	12.4

Table is continued on the next page.

Table 4-6. Percent of students in grades 1-12 enrolled in private school, by school district characteristic: 1990--Continued

Characteristics of school districts	Percent enrolled in private school
Parents not high school graduates	
Less than 10 percent	10.3
10-35 percent	9.7
More than 35 percent	9.5
Median family income	
Less than $25,000	5.9
$25,000-$40,000	9.8
More than $40,000	11.5
Children living in poverty	
Less than 10 percent	10.7
10-35 percent	9.5
More than 35 percent	8.7
Children with one or more parent unemployed	
Less than 4 percent	10.8
4 to 10 percent	9.7
More than 10 percent	9.2
Foreign born parents as percent of total	
Less than 2 percent	6.6
2-25 percent	8.8
More than 25 percent	13.8
Student-teacher ratios	
15 or less	9.4
15-21	9.5
More than 21	8.5
Instructional expense per pupil	
Less than $2,500	9.4
$2,500-$4,000	10.1
More than $4,000	10.9
Federal transfer per pupil	
Less than $100	10.5
$100 to $1,000	8.2
More than $1,000	7.2

Note: The school districts in tabulation X01D06G, for the student-teacher ratios, were classified on the basis of administrative data from the 1990 CCD.

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation references: size X01D02G, population X01D12G, urban population X01D09G, size of urban population X01D10G, two-parent family X01H01G, female-headed family X01H02G, minority children X01C04G, linguistically-isolated X01H09G, college-educated parents X01P25G, not high school graduates X01P25C, median family X01H12G, living in poverty X01H18G, parent unemployed X01P26G, foreign-born parents X01P28G, student-teacher X01D06G, instructional expense X01D04G, federal transfer X01D20G.

Instructional Expenditure Profile

This section examines average per pupil instructional expenditure to determine how these rates varied by states and school districts. (See "Instructional Expenditure per Pupil" in appendix A for details on how instructional expenditure rates were calculated.[2]) Average instructional expenditure includes all direct instructional expenses, including salaries and wages, retirement, and other personnel benefits, as well as direct expenditures for supplies and materials. The total national expenditure for instruction was approximately $100 billion.

In the comparisons that follow, it is important to keep in mind that these are average figures that may reflect a variety of differences among these groups—for example, differences in proportions living in urban areas, proportions living in high cost or high income areas, or proportions living in particular states or regions of the United States. There is the possibility that racial and ethnic differences in the expenditures data and other characteristics may reflect differences in the geographical distribution of various groups.

This section examines whether differences in mean instructional expenditures existed for different classes of children nationally and across states. More detailed state and school district data are included in the SDAB, so that comparisons with national norms and among different population groups can be analyzed.

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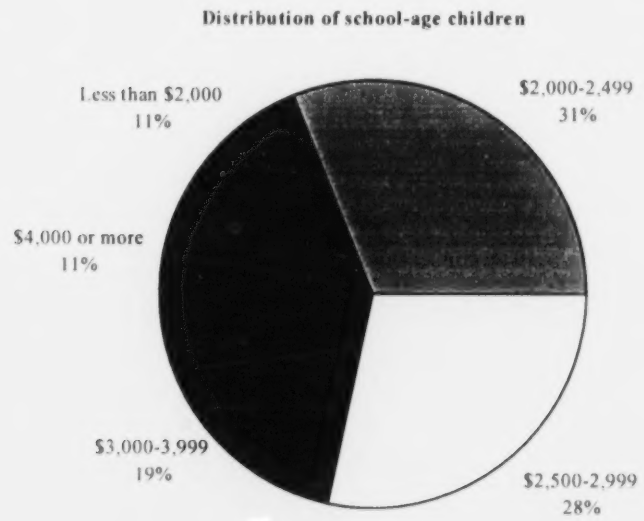
[2] The per pupil instructional expenditure for each district does not appear in the SDAB. Instead, the SDAB tabulations classify the school district per pupil expenditure by the following ranges: less than $2,000; $2,000 to $2,499 (i.e., less than $2,500); $2,500 to $2,999; $3,000 to $3,499; $3,500 to $,3999; $4,000 to $4,499; $4,500 to $4,999; $5,000 to $5,999; and more than $6,000. Tabulations show either the counts of districts or counts of children per these ranges. The per pupil instructional expenditure amounts that appear in the following pages are based on computations using the midpoints of these ranges: $1,770 (special calculation); $2,250; $2,750; $3,250; $3,750; $4,250; $4,750; $5,500; and $7,731 (special calculation). Averages were calculated by multiplying the midpoint of an expenditure category by the frequency reported for that category (number of children or number of school districts, as the case may be), summing the products over all categories, and dividing the resulting total expenditure figure by the number of districts (or the number of children).

Before per pupil instructional expenditure was calculated for a school district, the district needed to be matched across all three data sources: the 1990 Decennial Census School District Special Tabulations, the 1990 NCES Common Core of Data (CCD), and the 1990 Census of Governments School District Finances. (The SDAB used the CCD codes from the Census data; the number of pupils, the number of FTE teachers, and the population/square mile from the CCD data; and dollar amounts from the Finance data.) The districts that could not be matched were counted in the N/A column in the tabulations.

Distribution of School-Age Children by Average Per Pupil Instructional Expenditure of the School District

About 42 percent of children lived in school districts which spent less than $2,500 dollars per pupil in instructional expenses; about 11 percent of the children lived in school districts spending $4,000 or more (figure 4-17).

Figure 4-17. Distribution of school-age children, by districts' average per pupil instructional expenditure: 1990



Note: School districts were classified on the basis of administrative data from the 1990 CCD and financial data from the 1990 F-33.

Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01C02G.

Estimated Average Per Pupil Instructional Expenditure Rate by State

Where a child lived had a substantial effect on the amount of instructional dollars spent on his or her education (figure 4-18). For example, Connecticut led the nation in the amount of instructional dollars spent per pupil ($4,924), while Utah spent the fewest dollars per pupil ($1,782).[3] The national estimated average instructional expenditure across nearly 15,000 school districts was $2,893 per pupil in public schools in FY 1990.

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[3] The calculation of the average per pupil instructional expenditure (ppe) for a particular state is calculated by using the referenced SDAB tabulation, the range midpoints—$1,770; $2,250; $2,750; $3,250; $3,750; $4,250; $4,750; $5,500; and $7,731—, and the following formula:

$$\sum_i \frac{X_i * Y_i}{N - M}$$

where

X_i = number of students in range i
Y_i = midpoint of range i
N = total number of students
M = total number of N/A cases

For example, the average per pupil instructional expenditure figure of $4,924 for the State of Connecticut was calculated in two steps from tabulation F01G01as follows:

Step 1

ppe range (F01G01)	Number of children (F01G01)	x	ppe range midpoint	=	Estimated ppe
<$2k	2,180		$1,770		$3,858,600
$2k-2,499	0		$2,250		0
$2.5k-2,999	0		$2,750		0
$3k-3,499	3,460		$3,250		$11,245,000
$3.5k-3,999	30,952		$3,750		$116,070,000
$4k-4,499	153,905		$4,250		$654,096,250
$4.5k-4,999	206,369		$4,750		$980,252,750
$5k-5,999	222,923		$5,500		$1,226,076,500
$6k+	21,529		$7,731		$166,440,699
	Total children = 641,318				Total expenditure = $3,158,039,799

Step 2

The average per pupil expenditure was calculated by dividing the total expenditure by the total number of children (in the case of Connecticut, no children were listed in the N/A column):

$3,158,039,799/641,318 = $4924.30

Figure 4-18. Estimated average per pupil instructional expenditure rate by state: 1990

Note: Due to an error, the fiscal data for Nevada is missing from the SDAB CD-ROM. The Nevada line in tabulation F01G01 should read:

Total	<$2k	$2k-2,499	$2.5k-2,999	$3k-3,499	$3.5k-3,999	$4k-4,499	$4.5k-4,999	$5k-5,999	$6k Plus	N/A
186,834	0	167,636	17,460	0	1,314	0	152	272	0	0

Note: School districts were classified on the basis of administrative data from the 1990 CCD and financial data from the 1990 F-33.

Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01G01; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Expenditure rates varied with regions of the country, with the highest instructional expense per pupil in the Northeastern and Middle Atlantic coastal states. Nine of the ten states with the highest estimated average per pupil instructional expenditures were in the New England or the Middle Atlantic regions:

Connecticut	$ 4,924
New York	$ 4,804

New Jersey	$ 4,357
Rhode Island	$ 4,164
Alaska	$ 4,123
Maryland	$ 3,484
Delaware	$ 3,477
Maine	$ 3,466
Massachusetts	$ 3,419
Vermont	$ 3,303

The ten states with the lowest estimated average per pupil instructional expenditures were in the South, Rocky Mountain, or upper Great Plains regions:

Utah	$ 1,782
Mississippi	$ 1,826
Alabama	$ 1,883
Idaho	$ 1,934
South Dakota	$ 1,976
Oklahoma	$ 2,016
New Mexico	$ 2,082
Arkansas	$ 2,118
Louisiana	$ 2,121
North Dakota	$ 2,231

The preceding figures are statewide averages derived by aggregating instructional expenditures across all school districts and dividing that sum by the number of children in the state. Although the state in which a district is located had a substantial effect on instructional spending, there was significant variation in expenditures per pupil at the individual school district level.

School districts' allocations of instructional resources were affected by the community characteristics and social and educational conditions examined in the following sections.

Average Per Pupil Instructional Expenditure by District Size

Instructional spending per pupil varied with the size of the district. Smaller districts spent more per pupil and larger ones spent less, except for the very largest districts—those with 50,000 or more students (figure 4-19). For example, districts with fewer than 600 students spent about 10 percent above the national district average of $2,893, and districts with more than 599 students, but less than 50,000 students, spent slightly less than average. The greatest difference occurred between districts with fewer than 150 students ($3,383) and districts with between 10,000 and 25,000 students ($2,643).

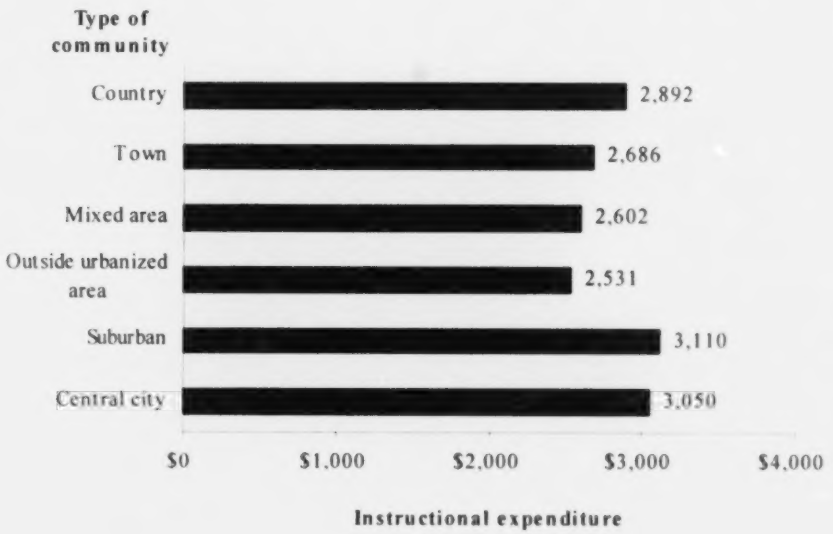
Figure 4-19. Average per pupil instructional expenditure, by school district size: 1990

Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01D02; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Average Per Pupil Instructional Expenditure by Community Type

The SDAB classifies school districts by six types of communities: central city, suburban, outside urbanized area, mixed (urban/rural), town, and country. The highest average expenditures were among suburban and central city districts ($3,110 and $3,050, respectively). The lowest average expenditure was $2,531, among districts categorized as urban areas outside "urbanized" areas. Districts located in the country spent close to the national average on educational instruction (figure 4-20).

Figure 4-20. Average per pupil instructional expenditure, by community type: 1990

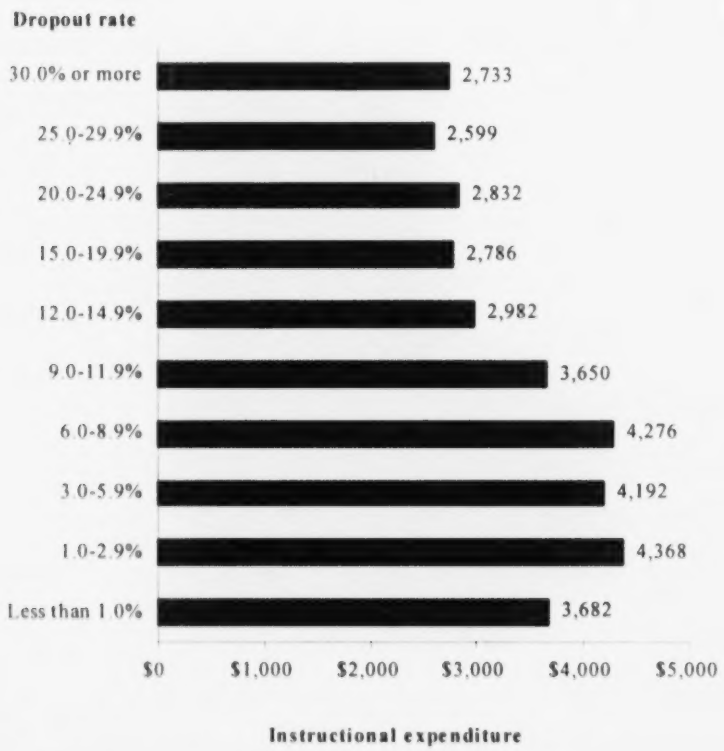


Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulations F01D27, D28, and D29; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Average Per Pupil Instructional Expenditure by District Dropout Rate

Districts with lower dropout rates (less than 12 percent) tended to spend substantially more than the national average per pupil on instruction (figure 4-21). Districts with higher dropout rates spent less per pupil on instruction, with the lowest rates in districts with dropout rates of 25 to 30 percent. The average instructional expenditure in districts with the highest dropout rates (30 percent or more) was about five percent lower ($157) than the national average.

Figure 4-21. Average per pupil instructional expenditure, by school district dropout rate: 1990

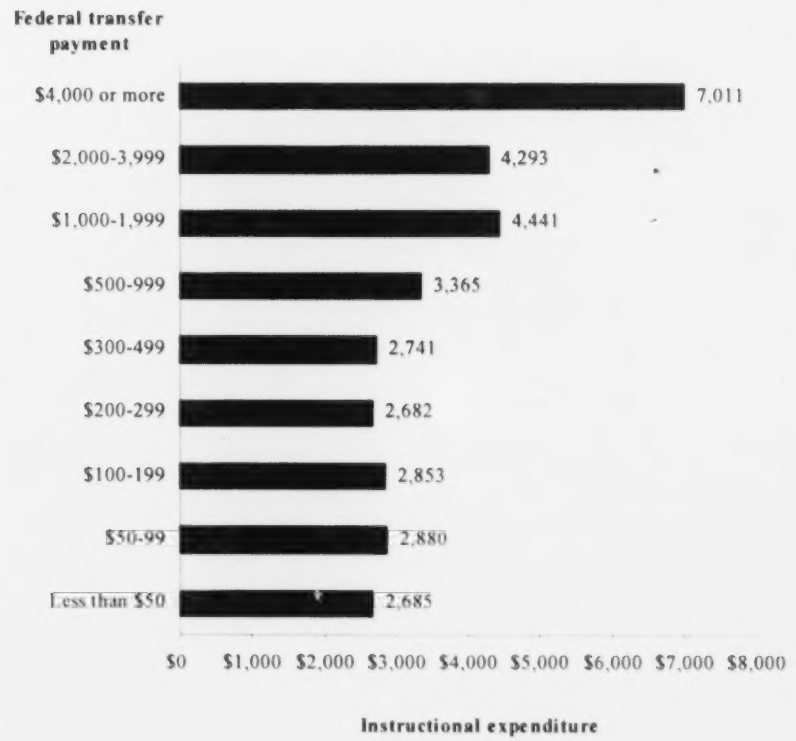


Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01D22; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Average Per Pupil Instructional Expenditure by Amount of Federal Transfer Payments to Districts

Districts receiving less than $500 dollars in federal transfer payments per student spent considerably less on instructional expense than those receiving in excess of $500 and especially lower than those receiving $1,000 or more when per pupil expenditures exceeded $4,000 (figure 4-22). The highest expenditures per pupil (about $7,000) were spent by districts receiving $4,000 or more in such transfer payments, but fewer than 300,000 children were living in such districts.

Figure 4-22. Average per pupil instructional expenditure, by amount of federal transfer payments: 1990



Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01D20; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Average Per Pupil Instructional Expenditure by District Minority Population

Instructional expense per pupil varied somewhat by the relative size of a school district's minority population (figure 4-23). Districts with less than 50 percent minorities (accounting for three-fourths of the nation's children) spent $2,800 per pupil (close to the national school district average) while high-minority districts (70 percent minority or higher) spent $3,304 per pupil—15 percent more than the national average.

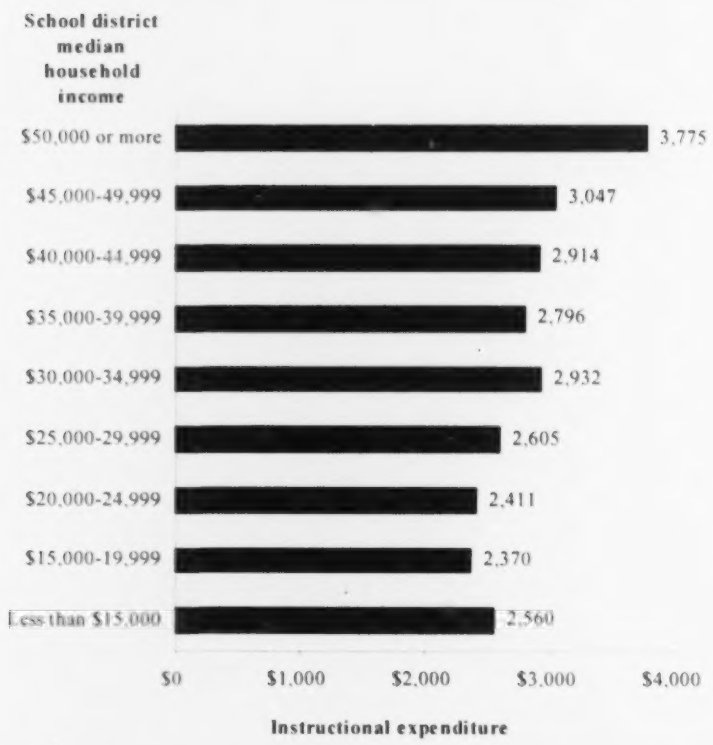
Figure 4-23. Average per pupil instructional expenditure, by percent of district minority population: 1990

Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01D14; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Average Per Pupil Instructional Expenditure by District Household Income

In general, the higher the median income per district, the higher the average instructional expenditure (figure 4-24). Generally, districts with median household incomes below $30,000 spent less than the national average per child, while those with median household incomes above $40,000 spent substantially more. (Districts between $30,000 and $40,000 spent, on average, at about the national rate.) The wealthiest districts (median incomes of $50,000 or more) spent on average 50 percent more than the poorest districts (median incomes below $25,000): $3,725 versus $2,427 per pupil.

Figure 4-24. Average per pupil instructional expenditure, by districts' median household income: 1990

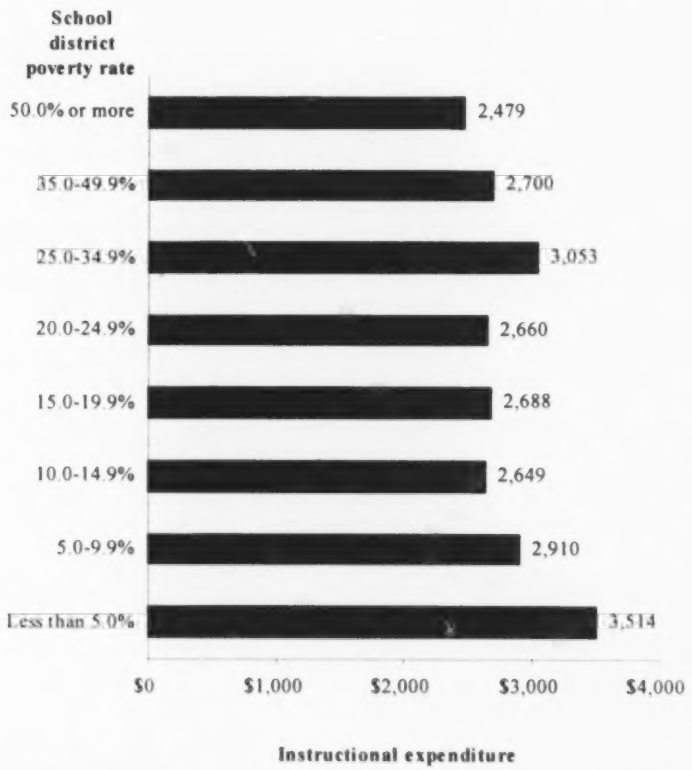


Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01D17; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Average Per Pupil Instructional Expenditure by District Incidence of Poverty

In 1990, school districts with less than five percent of their households living at or below the poverty level spent on average $3,514 per pupil in instructional expenditures. In contrast, districts with at least 50 percent of their households living in poverty spent on average about $1000 (roughly 30 percent) less than that—$2,479 per pupil (figure 4-25). For these districts, the average instructional expenditure per pupil was some 15 percent lower than the national average of $2,893.

Figure 4-25. Average per pupil instructional expenditure, by districts' percent in poverty: 1990



Source: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, U.S. Total, Tabulation F01D15; averages are derived from information in the SDAB using the midpoint assumptions described in the footnote on page 4-26.

Appendix A. Concepts and Definitions

The concepts and definitions in this report are based on those used by the underlying data sources. For example, data describing the resident population—such as household and family income, poverty, parental education, race and ethnicity, and language—are derived from the 1990 Census and correspond to the definitions employed in the Census. Data describing the administrative characteristics of school districts—such as district type (elementary, secondary, and consolidated) and number of children enrolled in district public schools—are from the 1989-90 Common Core of Data (CCD) compiled by NCES from state reports. These data follow the definitions employed by the CCD which are described in NCES publications. Financial characteristics of school districts —such as receipt of federal support and per pupil school district expenditures—are from the 1989-90 Survey of Local Government Finances and conform to the definitions employed by the Census of Governments as explained in Census Bureau publications. However, this appendix includes some terms unique to the 1990 Census school district special tabulations and also some concepts (such as "Relevant Children") unique to the School District Analysis Book. Topics defined are:

Age
At-risk children
Balance of county
Birthplace
Central city
Children 3 to19 years old, not high school graduates
Community type
Dropout rate
Education of parents
Enrollment
Family and subfamily
Farm residence
Federal Transfer Payments
Grade in school
Hispanic origin
Households and group quarters
Household relationship
Income in 1989
Instructional Expenditure per Pupil
Labor force status
Language Minority
Language spoken at home, linguistic isolation
Metropolitan area
Minority
Owner or renter occupied
Poverty status in 1989
Prekindergarten children
Public school
Public assistance
Race
Relevant children 3 to 19 years old
Regular school
School district
School-age children
Sex ratio
Universe
Urban and rural
Year moved into unit

AGE

The data on age were based on the age of the person in complete years as of April 1, 1990, as reported to the 1990 Census. Some SDAB tabulations are shown by the age of the child's mother.

AT-RISK CHILDREN
Children living with mother who is not a high school graduate, is single, divorced, or separated, and is below the 1989 poverty level, according to the 1990 Census. At-Risk Preschool Children are those under 6 years old. At-risk school-age children are 6 to 19 years old. Tabulations are available separately for all at-risk children and for at-risk children of mothers under 20 years old at the time of the child's birth.

BALANCE OF COUNTY
Territory in a county not recorded as served by public school districts in the county.

BIRTHPLACE
Data are based on responses to the 1990 Census question on state or country of birth. Foreign-born excludes persons born abroad of American parents.

CENTRAL CITY
In the Census, the largest place in each metropolitan area and urbanized area and, in some cases, additional places, are designated as "central cities" or "central places." The central city normally has a population of 50,000 or more.

CHILDREN 3 TO 19 YEARS OLD, NOT HIGH SCHOOL GRADUATES
Generally, persons at least 3 years old and not yet 20 or older who have not graduated from high school, as reported to the 1990 Census. However, the specifications for the Decennial School District Data Project in fact include all 14- to 17-year-olds regardless of whether they have graduated or not. This is the primary population of children shown in this report, except for "at-risk" children, which includes children under three years old.

COMMUNITY TYPE
Some school district characteristics are derived by tabulating 1990 Census characteristics for the district. Data on community type were generated in this way. School districts were first classified into the broad categories of urban, rural, and mixed. Within these categories, additional classifications were made, as noted.

> **Urban School District**—A school district with 70 percent or greater population in urban areas. Urban school districts are further classified as Central City School Districts, Suburban School Districts (in urbanized area, outside central city), and Urban Districts Outside Urbanized Areas, according to where the population is mainly concentrated.
>
> **Mixed School District**—A school district with between 30 percent and 70 percent of its population residing in urban areas.
>
> **Rural School District**—A school district with 30 percent or less urban population. Rural school districts are further classified as in a place of 500-2,500 population ("town"), and "not in a place" ("country").

District type	Number of districts	Number of children (in thousands)
All districts	14,897	55,324
Urban central city	631	17,668
Suburban	2,157	16,481
Outside urbanized area	1,072	3,424
Mixed	2,243	8,604
Town	1,943	1,064
Country	6,851	8,083

Source: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*.

DROPOUT RATE

School districts are classified by the proportion of the household population 16 to 19 years of age who are not enrolled in school and are not high school graduates, according to the 1990 Census.

EDUCATION OF PARENTS

Data on educational attainment are for persons 15 years old and older and measure the highest level of school completed or the highest degree received as reported to the 1990 Census. "High School Graduate or Higher" includes persons who reported to the Census that their highest degree was a high school diploma or its equivalent, persons who attended college or professional school, and persons who received a college, university, or professional degree. Persons who reported completing the 12th grade but not receiving a diploma and all other persons not completing high school are grouped as "no high school diploma."

ENROLLMENT

Enrollment status for children is from the 1990 Census. Persons were classified as enrolled if they reported attending a regular public or private school any time between February 1, 1990 and the time of the Census enumeration. The question included instructions to "include only nursery school, kindergarten, elementary school, and schooling which would lead to a high school diploma..." as a regular school. Enrollment in a trade or business school, company training, or tutoring were not to be included in regular schooling unless the course would be accepted for credit in a regular school.

FAMILY AND SUBFAMILY

A family consists of a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. In the Census, all persons in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may consist of a group of unrelated persons or one person living alone.

> **Husband-wife Family**—A family with the householder and the householder's spouse both present in the home. The husband-wife family may include children and additional relatives, or it may not.

Male Householder, No Wife Present—A family with a male householder and no spouse of householder present. In this report a male householder with no wife present may be referred to as a "single" male head or as a "solo" male head.

Female Householder, No Husband Present—A family with a female householder and no spouse of householder present. In this report a female householder with no husband present may be referred to as a "single" female head or as a "solo" female head.

Subfamily—A subfamily is a married couple (husband and wife enumerated as members of the same household) with or without never-married children under 18 years old, or one parent with one or more never-married children under 18 years old, living in a household and related to, but not including, either the householder or the householder's spouse. Subfamily members are counted as part of the householder's family. Subfamilies are further classified by type: married-couple subfamilies, mother-child subfamilies, and father-child subfamilies.

FARM RESIDENCE

The farm population consists of household members living in farm residences at the time of the Census. Farm residence is reported only in rural areas. An occupied one-family house or mobile home is classified as a farm residence if (1) the housing unit is located on a property of 1 acre or more and (2) at least $1,000 worth of agricultural products were sold from the property in 1989.

FEDERAL TRANSFER PAYMENTS

School districts are classified according to the dollar amount of federal aid received, according to the Census of Governments data on school district revenues. Federal transfer payments include federal aid administered through the states, such as the School Lunch Program, as well as federal financial assistance administered directly to the school district.

GRADE IN SCHOOL

In the 1990 Census, people were asked to report the highest grade they completed in school. Responses were grouped as nursery school, kindergarten, grades 1 to 4, grades 5 to 8, and single grades 9-12. Single year data were not collected for most grade levels. However, the SDAB uses imputation to break out the grouped data into single years. Some of the single-year grade distributions consequently look strange at the margins of the grouped data (e.g., grade 5).

The single-year grade detail is used to establish whether the child is a "relevant" child for the school district. First a grade is assigned. If a child is enrolled in school, then the **Assigned Grade** is the grade the child is in. If a child is *not* in school, then the child's Assigned Grade is the next highest grade above the last grade the child completed. An example of the use of this classification is as follows: a 19-year-old in a secondary or consolidated school district who completed the 9th grade is "assigned" to the 10th grade and is "relevant" to the secondary or consolidated district.

HISPANIC ORIGIN

Persons of Hispanic origin are those who classified themselves in one of the specific Hispanic origin categories listed on the 1990 Census questionnaire—"Mexican," "Puerto Rican," or

"Cuban"—as well as those who indicated that they were of "Other Spanish/Hispanic" origin. Persons of "Other Spanish/Hispanic" origin are those whose origins are Spain, the Spanish-speaking countries of Central or South America, or the Dominican Republic, or persons of Hispanic origin identifying themselves generally as Spanish, Spanish-American, Hispanic, Hispano, Latino, and so on. A Hispanic person may be of any race.

HOUSEHOLDS AND GROUP QUARTERS

Household—A household includes all the persons who occupy a housing unit. According to the Census, a housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. A *family household* includes a family; a *nonfamily household* consists of unrelated persons or one person living alone.

Group Quarters—If the living quarters contains nine or more persons unrelated to the householder or person in charge (a total of at least 10 unrelated persons), it is classified as group quarters. If the living quarters contains eight or fewer persons unrelated to the householder or person in charge, it is classified as a housing unit. All persons not living in households are classified by the Census Bureau as living in group quarters. Two general categories of persons in group quarters are recognized: (1) institutionalized persons and (2) other persons in group quarters (also referred to as "noninstitutional group quarters").

> **Institutionalized** children include children in homes for abused, dependent, and neglected children, residential treatment centers (serving emotionally disturbed children), training schools for juvenile delinquents, and detention centers. Institutions also include the following: jails, prisons and other correctional institutions; mental hospitals; hospitals for the chronically ill; schools, hospitals, or wards for the mentally retarded; schools, hospitals, or wards for the physically handicapped; hospitals, and wards for drug/alcohol abuse; wards in general and military hospitals, and facilities for patients who have no usual home elsewhere (including boarder babies).
>
> **Other Persons in Group Quarters** (also referred to as "noninstitutional group quarters")—Includes all persons who live in group quarters other than institutions. Persons who live in the following living quarters are classified as "other persons in group quarters" when there are 10 or more unrelated persons living in the unit; otherwise, these living quarters are classified as housing units: dormitories, rooming houses, group homes including such places as homes for the mentally ill, mentally retarded, and physically handicapped; drug/alcohol halfway houses; communes; and maternity homes for unwed mothers, and emergency shelters for homeless persons.

HOUSEHOLD RELATIONSHIP

One person in each household is designated as the householder. Other household members are described in terms of their relationship to the householder.

Householder—In most cases, this is the person, or one of the persons, in whose name the home is owned, being bought, or rented. In this report the householder may be referred to as the "head of household."

Spouse—Includes a person married to and living with a householder. This category includes persons in formal marriages, as well as persons in common-law marriages.

Child—Includes a son or daughter by birth, a stepchild, or adopted child of the householder, regardless of the child's age or marital status. The category excludes sons-in-law, daughters-in-law, and foster children.

Other Relatives—Anyone not listed in a reported category above who is related to the householder by birth, marriage, or adoption (grandchild, brother-in-law, grandparent, nephew, aunt, mother-in-law, daughter-in-law, cousin, and so forth).

Nonrelative—Includes any household member, including foster children, not related to the householder by birth, marriage, or adoption.

INCOME IN 1989

Data on income in 1989 were requested from persons 15 years old and older in the 1990 Census. "Total income" is the algebraic sum of the amounts reported separately for wage or salary income; net nonfarm self-employment income; net farm self-employment income; interest, dividend, or net rental or royalty income; Social Security or railroad retirement income; and public assistance or other income. "Earnings" are defined as the algebraic sum of wage or salary income and net income from farm and nonfarm self-employment. "Earnings" represent the amount of income received regularly before deductions for personal income taxes, Social Security, bond purchases, union dues, Medicare deductions, etc.

Family Income—Includes the income of the household and all other household members 15 years old and older *related to the householder*.

INSTRUCTIONAL EXPENDITURE PER PUPIL

School districts are classified by the level of instructional expenditure per pupil. Nationally, instructional expenditures were around 58 percent of total school district current expenditures in fiscal year 1990.

Instructional expenditures relate to the instruction function (series 1000) as defined in the NCES publication *Financial Accounting for Local and State School Systems, revised 1990* (commonly called Handbook II). The source of the data is the Census of Governments, Survey of Local Government Finance, 1990. Expenditure per pupil is calculated by dividing instructional expenditure by the number of pupils. The number of pupils is the CCD Membership figure for

the district reported in the Common Core of Data. Around October 1 of each year, school districts report the number of children enrolled; this is the "membership" figure. It is generally higher than average daily attendance, which reflects absences.

The data on instructional expenditures include payments for salaries, employee benefits, supplies, materials, and contractual services. They cover regular, special, and vocational programs covered in the regular school year and in summer school. The data include amounts that the state contributes to the school district retirement funds and instructional expenditures made on behalf of the school district. The figures *exclude* amounts for support services, food service, capital outlay, interest on debt, and other items not part of current instructional expenditures. Not all states prescribe the use of the above financial accounting handbook and its definition of instruction for their school systems. This results in some disparities in the figures for states. The most significant is that some state accounting systems do not include employee benefit payments or fixed charges in "instruction."

This report presents figures on estimated average instructional expenditure per pupil. The averages are derived from the expenditure distributions shown in the SDAB. Averages were calculated by multiplying the midpoint of an expenditure category by the frequency reported for that category (number of children or number of school districts, as the case may be), summing the products over all categories, and dividing the resulting total expenditure figure by the number of districts (or the number of children). For district expenditures under $2,000 per child, an average figure of $1,770 was obtained from tabulations of school district records in the School District Data Book (SDDB). For district expenditures over $6,000, an average value of $7,331 was used, based on the SDDB. Averages are calculated separately for the distribution of school districts and the distribution of children according to the per-pupil expenditures of the district they live in.

LABOR FORCE STATUS

Labor Force—All persons in the civilian labor force plus members of the U.S. Armed Forces, according to the 1990 Census. The civilian labor force consists of the employed plus the unemployed (lacking a job and looking for work).

Not In Labor Force—All persons 16 years old and over who are not classified as members of the labor force. This category consists mainly of students, housewives, retired workers, seasonal workers enumerated in an off season who were not looking for work, institutionalized persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week).

LANGUAGE MINORITY

Families in which the principle language spoken in the home is a language other than English.

LANGUAGE SPOKEN AT HOME, LINGUISTIC ISOLATION

Language Spoken at Home—Data on language spoken at home were derived from the answers to two census questionnaire items, which were asked of a sample of persons born before April 1, 1985. Instructions mailed with the 1990 census questionnaire stated that a respondent should

mark "Yes" in the first question if the person sometimes or always spoke a language other than English at home and should not mark "Yes" if a language was spoken only at school or if speaking was limited to a few expressions or slang. For the second question, respondents were instructed to print the name of the non-English language spoken at home. If the person spoke more than one language other than English, the person was to report the language spoken more often or the language learned first. In this report the term "language minority" denotes a home where the primary language spoken is other than English.

Ability to Speak English—Persons 5 years old and older who were reported to speak a language other than English had their ability to speak English indicated based on one of the following categories: "Very well," "Well," "Not well," or "Not at all."

The data on ability to speak English represent the person's own perception about his or her own ability or, because census questionnaires are usually completed by one household member, the responses may represent the perception of another household member. The instruction guides and questionnaires that were mailed to households did not include any information on how to interpret the response categories listed above.

Linguistic Isolation—A household is classified as "linguistically isolated" if, in households where the language spoken at home was other than English, no member 14 years old or older spoke English "very well." All the members of a linguistically isolated household are tabulated as linguistically isolated, including members under age 14 years who may speak only English or speak English "very well."

METROPOLITAN AREA

The metropolitan area classification is a statistical standard developed for data on metropolitan areas. The general concept is of a large population nucleus, together with adjacent communities that are integrated economically and socially with the nucleus. Each metropolitan area must contain either a place with a minimum population of 50,000 or a Census Bureau-defined urbanized area and a total metropolitan area population of at least 100,000 (75,000+ in New England). Data are from the 1990 Census.

MINORITY

School districts are classified by the percent of racial and ethnic minorities in the school-age population. Districts in which non-Hispanic whites make up less than 50 percent of the school-age population are classified as "minority" school districts or "minority-dominated" school districts.

OWNER OR RENTER OCCUPIED

All occupied housing units are classified by the Census as either owner occupied or renter occupied. A housing unit is owner occupied if the owner or co-owner lives in the unit, even if it is mortgaged or not fully paid for. All occupied housing units which are not owner occupied are classified as renter occupied, whether they are rented for cash rent or occupied without payment of cash rent.

POVERTY STATUS IN 1989

Data on poverty status were derived from answers to the same 1990 Census questions as the income data. The income cutoffs used by the Census Bureau to determine the poverty status of families and unrelated individuals depend on family size and number of family members under 18 years old. Unrelated individuals and two-person families were further differentiated by age of the householder (under 65 years old and 65 years old and older). The poverty levels are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index. The average poverty level for a family of four persons was $12,674 in 1989. If the total income was less than the corresponding cutoff, the family or unrelated individual was classified as "below the poverty level." The number of persons below the poverty level was the sum of the number of persons in families with income below the poverty level and the number of unrelated individuals with incomes below the poverty level.

PREKINDERGARTEN CHILDREN

Children who are attending a prekindergarten program or would be in such a program if they were enrolled in school. Data are from the 1990 Census. Generally, all 3-year-olds and 4-year-olds are included in this category.

PUBLIC ASSISTANCE

Children are classified according to whether their family reported cash income from public assistance in the 1990 Census. Public assistance income includes (1) Supplemental Security Income payments made by federal or state welfare agencies to low income persons who are elderly, blind, or disabled; (2) Aid to Families with Dependent Children; and (3) general assistance.

PUBLIC SCHOOL

Institution which provides educational services, has one or more grade groups (PK-12) or is ungraded, has one or more teachers to give instruction, is located in one or more buildings, has an assigned administrator, receives public funds as primary support, and is operated by an education agency. Tabulations of public school districts use classifications in the CCD or the Census of Governments, Survey of Local Government Finances. Tabulations of public school children use 1990 Census classifications.

Enrolled in Public or Private School—Includes persons who were reported in the Census as attending a regular school in the reference period and indicated they were enrolled by marking one of the questionnaire categories for either "public school, public college" or "private school, private college." The instruction guide defines a public school as "any school or college controlled and supported by a local, county, State, or Federal Government." Schools supported and controlled primarily by religious organizations or other private groups are defined as private. Public-private school enrollment tabulations in this report generally exclude children 3 and 4 years old because of data quality problems in the reporting of public-private enrollment at this age.

RACE

The concept of race used in the 1990 Census reflects self-classification by people according to the race with which they most clearly identify. Response categories reflect racial, national origin, and socio-cultural groups in the population. The racial classification used by the Census Bureau generally adheres to the guidelines in Federal Statistical Directive No. 15, issued by the Office of Management and Budget, which provides standards on ethnic and racial categories for statistical reporting to be used by all Federal agencies. The racial categories used in the 1990 census data in this report are provided below. This list does not include "Hispanic," which is an independent classification defined above; a Hispanic person may be of any race. In all tabulations (except as noted) the data for each race group exclude Hispanics, who are grouped separately. See also "Hispanic" and "minority," above.

White—Includes persons who indicated their race as "White" or reported entries such as Canadian, German, Italian, Lebanese, Near-Easterner, Arab, or Polish.

Black—Includes persons who indicated their race as "Black or Negro" or reported entries such as African American, Afro-American, Black Puerto Rican, Jamaican, Nigerian, West Indian, or Haitian.

Asian or Pacific Islander—Includes persons who reported in one of the Asian or Pacific Islander groups listed on the questionnaire or who provided write-in responses such as Thai, Nepali, or Tongan. In some data products, information is presented separately for the Asian population and the Pacific Islander population. Asian includes "Chinese," "Filipino," "Japanese," "Asian Indian," "Korean," "Vietnamese," and "Other Asian."

American Indian, Eskimo, or Aleut—Includes persons who classified themselves as such.

Other Race—Includes all other persons not reported in the "White," "Black," "American Indian, Eskimo, or Aleut," and the "Asian or Pacific Islander" race categories. Persons reporting in the "Other race" category and providing write-in entries such as multiracial, multiethnic, mixed, interracial, or a Spanish/Hispanic origin group are included here.

RELEVANT CHILDREN 3 TO 19 YEARS OLD

This report usually presents data on children 3 to 19 years of age who are not high school *graduates. (Note: 14- to 17-year-olds who had graduated from high school are part of the data base.)* In tables for states, counties and consolidated districts, this entire group is assigned as the relevant population. For elementary and secondary districts, which co-exist in the same area, the total group is divided based on assigned grade. The concept of relevant children is unique to SDAB statistics and is used to relate school children to the appropriate school district.

The relevant children for a school district are those who reside in the school district and are of an appropriate grade for the school district. Children whose grade is equal to or less than the highest grade taught in the elementary district are assigned as relevant for the district. The remainder are assigned as relevant for the secondary district. For example, children relevant to an elementary

district are children enrolled in or assigned to grades PK-8 or whatever the standards are for that state. Children relevant to a secondary district may be, for example, enrolled in or assigned to grades 9-12. Children relevant to a consolidated school district may be enrolled in or assigned to grades PK-12. Children of preschool age are all classified as relevant for the elementary school district.

The concept of relevant children applies only to school district tabulations. Since two or more school districts can cover the same territory, the concept of relevant children is used to designate the subset of the population for which an elementary or secondary school district is responsible.

REGULAR SCHOOL
A public elementary or secondary school that does not focus primarily on vocational, special, or alternative education.

SCHOOL DISTRICT
A school district is a geographic area within a state in which a public school system operates as a governmental entity with responsibility for operating public schools in that geographic area. School districts may be wholly contained in one county or may include parts of many counties. School districts may include either Indian reservations or military school districts, depending upon whether or not the state government identifies them as agencies for carrying out the state's public school program.

This report includes regular school districts identified in the Common Core of Data (CCD) operated by the National Center for Education Statistics based on reports from state education agencies and mapped in the Census Mapping Project. In this report, a school district is an education agency or administrative unit that operates under a public board of education and is recognized by state education authorities. This report *excludes* about 1,300 nonregular school districts (supervisory units and regional, state, and federal administrative units); it also *excludes* a few regular school districts for which maps were not available. (See appendix B, SDAB: Data Sources and Data Quality Limitations for information about maps.)

The Census Mapping Project (see appendix B) was coordinated by the National Center for Education Statistics and individual participating states through the Council of Chief State School Officers. Boundaries of the school districts were defined as of the 1989-1990 school year. Data from the 1990 Census were tabulated for these districts. This report includes data for approximately 15,000 school districts. The total number of districts varies somewhat from subject to subject. This report recognizes several types of school districts:

> **Consolidated School District**—A public school district which provides education for persons in grades which may range from prekindergarten (or kindergarten) through grade 12, as shown in the CCD. The range always includes grades below 9 and above 8.
>
> **Elementary School District**—A public school district which provides education for persons in any range of grades from pre-kindergarten (or kindergarten) through but not exceeding 8.

Secondary School District—A public school district which provides education for persons in grades ranging from no less than 9 to no more than 12.

SCHOOL-AGE CHILDREN
Generally, persons at least 3 years old and not yet 20 or older who have not graduated from high school, as reported to the 1990 Census. However, the specifications for the Decennial School District Data Project in fact include all 14- to 17-year-olds regardless of whether they have graduated or not. This is the primary population of children shown in this report, except for "at-risk" children, which includes children under three years old.

SEX RATIO
A measure calculated by dividing the total number of males by the total number of females, as reported in the 1990 Census, and multiplying by 100.

UNIVERSE
There are two kinds of universes: children and school districts. In the child tabulations, all counts are counts of children. These may be shown by the child's own characteristics, their parents' characteristics, or the characteristics of the school district where they live. School district tabulations tally school districts. These are frequency distributions of school districts classified by school district characteristics.

Other units never appear as populations in this report or in the source of data, the School District Analysis Book. For example, children are shown by characteristics of their households and their parents, such as household income and parents' education. But counts of the number of households, parents and families never appear in the SDAB.

URBAN AND RURAL
"Urban" denotes all territory and population in urbanized areas and in places of 2,500 or more persons outside urbanized areas. Rural territory is territory not classified as urban. Rural territory is further classified into nonfarm and farm.

Urbanized Area—The Census Bureau delineates urbanized areas to provide separation of urban and rural territory in the vicinity of large cities. An urbanized area consists of one or more places ("central place") and the adjacent densely settled surrounding territory ("urban fringe") that together have a minimum of 50,000 persons and an overall population density of 1,000 or more persons per square mile. One or more central places function as the dominant center(s) of each urbanized area.

YEAR MOVED INTO UNIT
The data on year moved into unit refers to the year of the latest move by the householder.

Appendix B. SDAB: Data Sources and Data Quality Limitations

Sources of Data. This report is based on the data in the School District Analysis Book (SDAB). The SDAB is an interactive facility to support research into District of Columbia, state, or national demographic statistics of school districts and children. Tables resembling spreadsheets interrelate characteristics of school districts, children, parents, and households in two or three dimensions. One of the dimensions may be selected from a set of 47 different classifications of school districts into ranges of characteristics such as size, percent minority, median income, etc. The second dimension is typically one of approximately 140 census tables, but it may also be a set of class intervals of school district characteristics. For those spreadsheets reporting children, a third dimension may iterate on enrollment, race, or age groups. By choosing the appropriate dimensions, a researcher can study enrollment patterns by various demographic, social, and economic categories, such as urbanization, language spoken, income, race, and so forth. Any of the approximately 7,000 possible studies for a state may be viewed, printed, or exported.

The effort to develop the SDAB began in 1988 with the 1990 Census Mapping Project. Under this project, sponsored by the National Center for Education Statistics and coordinated by the Council of Chief State School Officers, all states participated in a program to develop school district maps. A public school district is an area whose public schools are administratively affiliated with a local education agency recognized by the state education agency as responsible for implementing the state's elementary and secondary public education program. Through the Census Mapping Project, 15,304 areas were mapped: 14,985 school districts and 319 "pseudo" school districts.[1] The Census Mapping Project districts were assigned names and codes from the 1989-90 Common Core of Data where possible.

The paper maps, the first complete set ever to be developed for the nation, were sent to the U.S. Bureau of the Census. The Census Bureau digitized the maps and transferred the resulting data into the TIGER (Topologically Integrated Geographic Encoding and Referencing) System, which it uses as a way of tabulating address-oriented data. Once the school district maps were a part of the TIGER system, each of the nation's 6.5 million census blocks could be uniquely associated with its respective school district. The 1990 Decennial Census information could then be assembled for all school districts. This material was developed into the 1990 Census School District Special Tabulation. For some tabulations in the SDAB, additional data from the NCES Common Core of Data[2] and the 1990 Census of Governments School District Finances (i.e., the

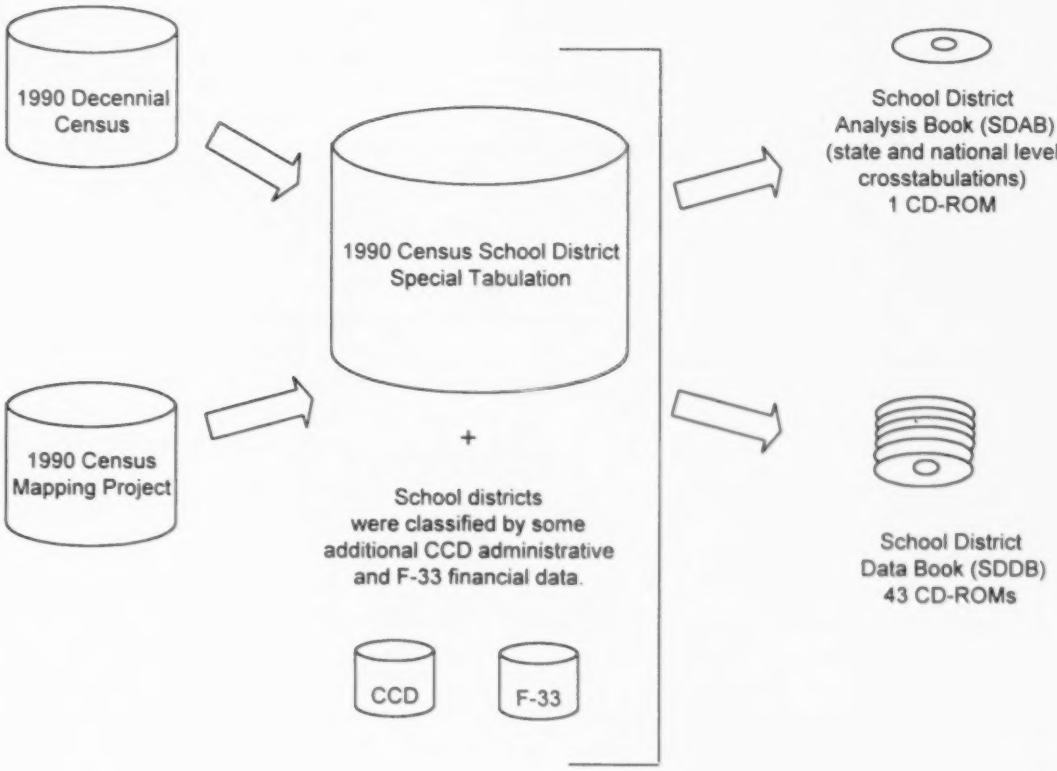
[1] See the discussion of pseudo districts under Data Quality Limitations, p. B-3.

[2] For this project, only CCD administrative data was used—school district ID, total population (100 percent) of district, area of district (square kilometers), FIPS code-State, full-time equivalent (FTE) classroom teachers, and the sum of students reported in school. The administrative data were derived from the 1989-90 Common Core of Data-School Level File. However, the CCD file used in this project was custom developed by the Census Bureau. It presents similar subject matter data as the conventional annual file that is released publicly, but the data were organized differently. See p. 10 of the U.S. Department of Education, National Center for Education Statistics, *Census Mapping Project / School District Data Book*, Working Paper Series No. 96-04, February 1996.

F-33) [3] were used to classify the districts.[4]

The SDAB was not the only product of the data project; NCES also coordinated development of the School District Data Book (SDDB). The SDDB is a massive database of approximately 20 gigabytes of statistical data (11 billion numbers) entered on 43 CD-ROMs. The SDDB consists of detailed information about *individual school districts* and their populations of schoolchildren whereas the SDAB (on which this report is directly based) contains statistical *summaries* that describe school district and population information *nationally and by state*.

Figure B-1. Relationship of data


1990 Decennial Census
1990 Census Mapping Project
1990 Census School District Special Tabulation
+
School districts were classified by some additional CCD administrative and F-33 financial data.
CCD
F-33
School District Analysis Book (SDAB) (state and national level crosstabulations) 1 CD-ROM
School District Data Book (SDDB) 43 CD-ROMs

Data Quality Limitations. This section describes limitations of the SDAB data related to (1) "pseudo" districts from the Census Mapping Project, (2) public versus private enrollment of prekindergarten-age children and (3) average per pupil instructional expenditures.

[3] The F-33 variables used in the SDAB were the (1) FIPS code, (2) revenue direct from the Federal government, (3) Federal aid through the State—school lunch, (4) Federal aid through the State—all other, (5) instruction expenditures, (6) expenditures on behalf of school system—instruction (often imputed), and (7) retirement fund transfer to own system. The F-33 data used to develop tables in the SDAB correspond to the F-33 file as of 2/10/93.
[4] See the discussion of instructional expenditures under Data Quality Limitations, p. B-4.

1) "Pseudo" districts from the Census Mapping Project. The Census Mapping Project mapped 14,985 school districts; however, maps were not available for some school districts, and some districts could not be matched to the source data bases (1990 Census School District Special Tabulation, 1990 Common Core of Data, and 1990 Survey of Local Governments). Census created 319 pseudo districts to cover the areas for which maps were unavailable: 30 balance-of-county pseudo districts, 268 sub-district pseudo districts, and 21 county-equivalent pseudo districts for California, the only state not to fully participate in the Census Mapping Project. At the national level, we use data for all districts, including pseudo-districts, but where data are presented state-by-state in this report, California data are not shown since it did not fully participate in the project. (See below for details.) Secondly, totals in the SDAB tables may differ somewhat. Some of the 55.3 million children in the SDDB and SDAB could not be identified with a particular school district and so are not included in the population of relevant children for the school district tabulations. (Data for such children are included in SDAB source tabulations in a "balance-of-county" category.) However, because of the small size of numbers involved, these differences do not affect this analysis.

Balance-of-County Pseudo Districts. Most areas of the United States are covered by one or more school districts. However, there are parts of some states that are not covered by any school district. These 30 areas are referred to as "balance-of-county" areas and treated as "pseudo" school districts in the SDAB and SDDB. Balance-of-county areas, as the name suggests, are the residual part(s) of a county not assigned to any school district. Although these areas are treated as one area within a county for data tabulation purposes, in most cases a balance-of-county area is actually composed of several non-contiguous parts.

While balance-of-county areas are not recognized by the State or Federal Government as true school districts, data were tabulated for these areas in the 1990 Census School District Special Tabulation. Due to the inclusion of these balance-of-county areas, all areas of the United States are accounted for through the Census Mapping Project and 1990 census school district tabulations. Balance-of-county pseudo districts have district codes that begin with the two characters 81 (no other district codes in the United States have 81 as the starting digits). The SDAB includes a separate collection of spreadsheets for these balance-of-county areas.

Sub-District Pseudo Districts. In Hawaii, which is collectively one school district, the Census Mapping Project mapped 231 sub-districts. In New York, 37 sub-districts within the New York City Public School District were mapped (32 community school districts and 5 borough secondary school districts).

California Pseudo Districts. The State of California was the only state not to fully participate in the Census Mapping Project. As a result, some school districts in California were not mapped, nor were census data tabulated for these areas as true school districts. Twelve California counties, which are composed of two or more true districts, were not mapped at the district level (Butte, El Dorado, Humboldt, Kings, Madera, Mariposa, Monterey, Napa, San Benito, Santa Barbara, Siskiyou, Tehama, and Trinity). In these cases, the county itself was used as a pseudo district for census data tabulation purposes.

Since data were tabulated for these county-wide pseudo district areas, the demographic data are available for California on a statewide basis even though data are not separately provided for many true districts. The number of true districts in California as conveyed by the Census Mapping Project is approximately 20 percent fewer than the true number of districts in the State. Because of that, at the national level, we use data for all districts, including pseudo-districts, as described above. However, since California did not fully participate in the project, California data are not shown in this report in those cases where state-by-state data are cited.

2) Public versus private enrollment for prekindergarten-age children. This report does not present information on public/private enrollment for preschool children. That is, public/private enrollment data are shown for children 5 to 19 years old, not for children 3 and 4 years old; and, data that include preschool ages do not show detail on public/private enrollment.

The decision to exclude these data from the report is based on the large differences between the 1990 Census figures on private school enrollment of these children and the figures from the Current Population Survey (CPS) as reported in U.S. Bureau of the Census, *Current Population Reports,* Series P-20, No. 452, "School Enrollment: October 1989."

Enrollment of 3- to 4-year-olds	SDAB (1990 Census data)	Current Population Survey, October 1989
Percent enrolled of 3-4	28.9	39.0
Public	13.3	13.6
Private	15.6	25.4
Percent private of enrolled	54.0	65.1

About 29 percent of children 3 and 4 years old are reported in the SDAB as enrolled, compared with 39 percent in the CPS. All of this difference in total enrollment is in the private school enrollment figures: the SDAB reports 16 percent of children are enrolled, compared with the CPS figure of 25 percent. The distribution of enrolled children is correspondingly affected. The SDAB shows that 54 percent of 3- and 4-year-olds are enrolled in private school, compared with the CPS estimate of 65 percent.

3) Average per pupil instructional expenditure. As defined in *Public Education Finances: 1989-90* (p. 3), instructional expenditure

> relates to the instruction function (series 1000) defined in the National Center for Education Statistics (NCES) publication *Financial Accounting for Local and State School Systems*, commonly called *Handbook II, Revised (1990)*. It covers expenditures for regular, special, and vocational programs offered in both the regular school year and summer school. It excludes instructional, student, and other support activities as well as adult education, community services, and student enterprise activities.

> Since not all States prescribe the use of the above financial accounting handbook and its definition of instruction for their school systems, some interstate disparities exist. The most significant is that some State accounting systems do not include employee benefit payments or fixed charges in 'instruction.'

Estimates of average per pupil instructional expenditures (ppe) for states in this report are based on numbers in tabulations from the School District Analysis Book (SDAB). Before explaining how state-level average ppes were calculated in this report, we need to look at how SDAB classified each school district within a state. First, each district in the 1990 Census School District Special Tabulation had to be matched to a district in both the CCD and F-33 files. This sometimes resulted in a lower number of districts being included in the SDAB than were included among the Special Tabulation, CCD, or F-33;[5] see table B-1 for differences in the number of inscope districts across these sources. Second, for every matched district, the average ppe figure was calculated as the ratio of the total instructional expenditure figure for that district (identified in the SDAB F-33 source file) and the corresponding number of enrolled children (identified from the SDAB CCD source file). Districts that did not include children could not be used in the ppe calculations because the denominator—number of enrolled children—could not be zero. However, the per pupil instructional expenditure for each district does not appear in the SDAB. Instead, the third step in developing SDAB tabulations is to classify the school district or the children by the following ppe ranges: less than $2,000; $2,000 to $2,499 (i.e., less than $2,500); $2,500 to $2,999; $3,000 to $3,499; $3,500 to $,3999; $4,000 to $4,499; $4,500 to $4,999; $5,000 to $5,999; and more than $6,000. The per pupil instructional expenditure amounts that appear in this report are based on computations using the midpoints of these ranges: $1,770 (special calculation); $2,250; $2,750; $3,250; $3,750; $4,250; $4,750; $5,500; and $7,731 (special calculation).

Estimated state-level ppe averages were calculated by multiplying the midpoint of an expenditure category by the frequency reported for that category (number of children or number of school districts, as the case may be), summing the products over all categories, and dividing the resulting total expenditure figure by the number of districts (or the number of children). These estimated averages will differ from actual per pupil expenditure figures developed from the F-33 data because of the above estimation process. (See table B-2 and figure B-2.) The SDAB averages may differ because of another reason as well. The F-33 data included in the SDAB corresponds to the FY 1990 F-33 file as of 2/10/93. The F-33 data files are continually updated, so there have been modifications of the F-33 since that date which are not reflected in the SDAB.

For further information, please refer to the following publications:

Parrish, T.B., Matsumoto, C.S. and Fowler, Jr., W.J. 1995. *Disparities in Public School District Spending 1989-90: A Multivariate, student-weighted analysis, adjusted for differences in geographic cost of living and student need.* NCES 95-300. Washington, DC: U.S. Department of

[5] District Ids that did not match may be the result of coding errors. "The source of the coding errors lie with incomplete processing on the part of Census" (p. 45). Census provided both the CCD and F-33 source files used to develop the SDAB. See National Center for Education Statistics. *Census Mapping Project School District Data Book*. NCES Working Paper Series No. 96-04. February 1996.

Education, Office of Education Research and Improvement, National Center for Education Statistics.

Synectics for Management Decisions, Inc. 1996. *Assessing Quality of CCD Data Using a School-Based Survey. Final Report.* Contract No. RN910600.01.

U.S. Bureau of the Census. 1992. *Public Education Finances: 1989-90.* Series GF/90-10. Washington, DC: U.S. Government Printing Office.

Table B-1. Number of regular school districts in original source files versus the number of matched school districts used in SDAB calculations of average ppe, by state

	Number of school districts before matching			SDAB
	1990 Census School District Special Tabulation	CCD source file	F-33 source file	Number of matched districts used in ppe calculations
U.S. Total	**14,897**	**14,198**	**15,276**	**13,791**
Alabama	132	132	129	127
Alaska	54	54	57	54
Arizona	219	222	233	208
Arkansas	329	329	347	326
California[1]	-	-	-	-
Colorado	176	176	203	174
Connecticut	166	166	166	166
Delaware	16	16	19	16
District of Columbia	1	1	1	1
Florida	67	67	67	67
Georgia	189	189	202	185
Hawaii	1	1	1	1
Idaho	111	112	115	108
Illinois	958	958	1,016	949
Indiana	303	303	321	300
Iowa	430	430	446	429
Kansas	304	304	338	302
Kentucky	178	177	178	176
Louisiana	67	67	66	66
Maine	289	282	293	225
Maryland	24	24	24	24
Massachusetts	326	329	437	321
Michigan	561	561	620	561
Minnesota	436	436	566	433
Mississippi	151	151	159	151
Missouri	541	541	545	541
Montana	516	540	567	499
Nebraska	788	836	862	754
Nevada	17	17	17	17
New Hampshire	170	170	212	153
New Jersey	575	576	616	554
New Mexico	88	88	88	88
New York	708	741	759	686
North Carolina	136	136	139	132
North Dakota	277	281	318	272
Ohio	611	613	662	610
Oklahoma	603	603	635	601
Oregon	299	301	331	296
Pennsylvania	501	501	617	500
Rhode Island	37	37	37	37
South Carolina	92	92	91	91
South Dakota	184	180	189	172
Tennessee	139	138	141	137
Texas	1,053	1,054	1,057	1,049
Utah	40	40	40	40
Vermont	257	259	334	238
Virginia	138	138	138	132
Washington	293	296	304	290
West Virginia	55	55	55	55
Wisconsin	429	429	466	428
Wyoming	49	49	52	49

[1] Since California did not fully participate in the Census Mapping Project, specific data for the State are not shown.

SOURCE: U.S. Bureau of the Census, *1990 Census School District Special Tabulation*, *1990 F-33* (see 90 SCH-FILE C for record counts for 1990 Education Finance Record). U.S. Department of Education, National Center for Education Statistics, *1989-90 Common Core of Data:School District Analysis Book (SDAB)*, 1990, CD-ROM, Tabulation F02G01.

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Table B-2. Average per pupil instructional expenditure (ppe), by state, for SDAB (estimated) and the 1990 F-33

	SDAB estimated average ppe	F-33 average ppe[1]
U.S. Total	**2,893**	**2,794**
Alabama	1,883	1,696
Alaska	4,123	4,175
Arizona	2,277	2,282
Arkansas	2,118	2,047
California[2]	-	2,887
Colorado	2,496	2,532
Connecticut	4,924	4,660
Delaware	3,477	3,523
District of Columbia	3,250	3,312
Florida	2,611	2,534
Georgia	2,457	2,466
Hawaii[3]	-	2,477
Idaho	1,934	1,806
Illinois	2,549	2,499
Indiana	2,480	2,541
Iowa	2,472	2,435
Kansas	2,540	2,458
Kentucky	2,272	2,103
Louisiana	2,121	2,024
Maine	3,466	3,214
Maryland	3,484	3,365
Massachusetts	3,419	3,438
Michigan	2,922	2,779
Minnesota	3,038	3,022
Mississippi	1,826	1,820
Missouri	2,321	2,332
Montana	2,581	2,565
Nebraska	2,690	2,646
Nevada	2,314	2,306
New Hampshire	2,956	2,954
New Jersey	4,357	4,053
New Mexico	2,082	2,059
New York	4,804	4,660
North Carolina	2,543	2,550
North Dakota	2,231	2,264
Ohio	2,440	2,470
Oklahoma	2,016	2,002
Oregon	2,804	2,688
Pennsylvania	3,256	3,439
Rhode Island	4,164	3,937
South Carolina	2,312	2,250
South Dakota	1,976	1,972
Tennessee	2,497	2,389
Texas	2,434	2,340
Utah	1,782	1,653
Vermont	3,303	3,501
Virginia	2,881	2,833
Washington	2,575	2,552
West Virginia	2,590	2,328
Wisconsin	3,134	3,155
Wyoming	3,087	3,086

[1]The F-33 ppe figures cited here are based on a later version of the F-33 file than was available during SDAB development.

[2]Since California did not fully participate in the Census Mapping Project, its state-level SDAB data are not shown.

[3]The instructional expenditure data for Hawaii are missing from the SDAB.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM, (see tabulation F01G01). U.S. Bureau of the Census, *Public Education Finances: 1989-90*, GF/90-10 (see Table 12).

Figure B-2. Percent difference between average ppe in the SDAB (estimated) and the F-33

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Source of numbers used in the comparison: U.S. Department of Education, National Center for Education Statistics, *School District Analysis Book (SDAB)*, 1990, CD-ROM.
U.S. Bureau of Census, *Public Education Finances: 1989-1990*, GF/90-10, 1992.

Appendix C. SDAB: Accuracy of Data

As noted above, the data sources used in the SDAB are the 1990 Census, the NCES Common Core of Data, and the 1990 Census of Governments.

- 1990 Census—The data items included in this report, as well as in the SDAB, are based on the 1990 census sample. Approximately one household in six completed the long-form questionnaire which included the more detailed questions about such items as enrollment and income. The basic demographic information, such as race, age, Hispanic origin, and family composition, was asked of every person in the United States.

Data based on samples differ somewhat from that which would have been obtained had the entire population responded to the inquiry because of sampling error. This error is a measure of the variation among the estimates from all the possible samples, and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The tables in this report have been constructed with data obtained primarily from two sources: school district-level reported data and census long-form data.

School district-level reported data was collected (directly or indirectly) from all the school districts and did not involve any sampling. Census long-form data, on the other hand, was collected from approximately 16 percent of all the households in the country. Thus any estimate built from this data will have sampling error.

In some of these tables, the Census data has been used to classify districts into nonoverlapping categories: it is not possible to calculate the sampling error for data from these tables without going to the data in the original form. In such cases, we ignore the sampling error involved in the classification. However, whenever the census data was used to develop any estimate, the estimate will have a sampling error which can be calculated conditional on the categories already formed.

In addition to the variability which arises from the sampling procedures, the data are subject to nonsampling error, which may be introduced during any of the various complex operations used to collect and process the census data. Such biases are not reflected in the standard error.

Nonsampling error may affect data in two ways. Errors that are introduced randomly will increase the variability of the data and, therefore, should be reflected in the standard error. Errors that tend to be consistent in one direction will result in data biased in that direction. Such biases are not reflected in the standard error. Examples of sources of nonsampling error include undercoverage of persons and housing units, respondent error in providing information, enumerator error or misinterpretation in recording answers, in contacting wrong households or inappropriate respondents, errors in processing the data at any one of the many stages involved from collection to tabulation, and adjustment for nonresponse, either to particular questions or to the full questionnaire. It should be noted that the Census instituted a wide variety of programs to control these possible sources of error. The 1990 Census Evaluation Program provides a measure of the effects of these programs and the amount of error remaining after their application.

The sample estimate and its standard error enable one to construct a confidence interval; that is, a range that includes the average result of all possible samples with a known probability. For example, if all possible samples were surveyed under essentially the same general conditions and using the same sample design, and if an estimate and its standard error were calculated from each sample, then approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimates would include the average result of all possible samples. Using 1.645 standard errors below and above the estimate would place approximately 90 percent of the results of all possible samples in the interval.

The examples and tables on the following pages contain information necessary to calculate standard errors for estimates derived from the 1990 Census:

- Use table C-1 to obtain the design factor appropriate to the characteristic and the percent in sample, multiply the basic standard error by this factor. The product is the standard error for the estimate.

Table C-1. Standard error design factors

Characteristic	Design factor
Age	1.2
Sex	1.2
Race	1.2
Hispanic origin	1.2
Ancestry	2.1
Place of birth	2.2
Language spoken at home and ability to speak English	1.7
Educational attainment	1.3
School enrollment	1.8
Family type	1.2
Household income in 1989	1.2
Family income in 1989	1.2
Poverty status in 1989 (persons)	1.6
Poverty status in 1989 (families)	1.2

Source: U.S. Bureau of the Census. *Summary, Social, Economic, and Housing Characteristics*, Appendix C. Series 1990 CPH-5-1.

- Obtain the standard error by following the procedure demonstrated in the examples below (exact cases) or use table C-2 for the estimated total or C-3 for the estimated percentage to calculate unadjusted standard errors (these will be approximations).

To estimate the standard error of a sum of or a difference between two sample estimates, the appropriate standard error is approximately the square root of the sum of the two individual standard errors squared.

Estimated standard errors, as noted earlier, do not include all portions of the variability due to nonsampling error that may be present in the data. They reflect the effect of simple response

variance, but not the effect of correlated errors introduced by enumerators, coders, or other field or processing personnel. Thus, the standard errors as calculated represent a lower bound of the total error. As a result, confidence intervals formed using these estimated standard errors may not meet the stated levels of confidence (i.e., 68, 90, or 95 percent). Thus, some care must be exercised in the interpretation of the data based on the estimated standard errors. Similarly, caution should be exercised in using data based on very small samples or in interpreting very small differences between estimates.

The following are some illustrations of how to compute a standard error and the corresponding confidence interval of a proportion, a percentage, and a total, and to test hypotheses for the equality of two percentages.

Let us consider the variable "3- to 4-year-olds enrolled in prekindergarten." This variable can be expressed both as a proportion (p) and also as a percentage (100p). We will use the data for the State of Hawaii to demonstrate the construction of confidence intervals.[1]

Example 1—Proportion: The proportion of 3- or 4-year-old children who are enrolled in prekindergarten is 0.3573. Since the Census long-form used only 16 percent of the households on an average, we can assume that the sample size is approximately 32,729 (N) divided by 6, which equals 5,455 (n).

The standard error is given by the following formula:

$$\left(\sqrt{\left(\frac{N-n}{N}\right)\left(\frac{p(1-p)}{n-1}\right)}\right)DF$$

where DF equals the design factor. On table C-1, we see that the design factor corresponding to school enrollment is 1.8. This factor is multiplied by the standard error calculated below.

Thus, the expression equals

$$\left(\sqrt{\left(\frac{32{,}729-5454}{32{,}729}\right)\left(\frac{(0.36)(0.64)}{5453}\right)}\right)1.8$$

The standard error is (0.0059)(1.8) = 0.0106.

Accordingly, the 68 percent confidence interval is 0.36 - 0.0106, 0.36 + 0.0106

= 0.3494 to 0.3706

Example 2—Percentage: The percentage is obtained by multiplying the proportion by 100. In the same way, the standard error for the percentage is obtained by multiplying the corresponding standard error for the proportion by 100. Thus, the percentage is 100(0.36) equals 36, the standard error of 36 percent is 100(0.0106) equals 1.06, and the 68 percent confidence interval

[1] There may be some discrepancies due to rounding.

for the case when neither the finite population correction nor the design factor is ignored is 36 - 1.06, 36 + 1.06

= 34.94 percent to 37.06 percent

Example 3—Totals: The total number (T) of 3- or 4-year-olds enrolled in prekindergarten in Hawaii is estimated to be 11,694. This number equals the product of 32,729 (the total number of 3- or 4-year-olds in Hawaii) and the estimated proportion, 0.3573. Thus the estimate of the total number of 3- or 4-year-olds enrolled in prekindergarten is 32,795(0.3573) equals 11,694.

To estimate the standard error of the total number, we multiply the standard error of the proportion by 32,729 to get 347. Therefore, the 68 percent confidence interval is 11,694 - 347, 11,694 + 347

= 11,347 to 12,041

Example 4—Differences: When comparing two percentages, $100p_1$ and $100p_2$, the usual t test employs the following procedure.

$$t = \frac{100p_1 - 100p_2}{\sqrt{[SE(100p_1)]^2 + [SE(100p_2)]^2}}$$

For our example, suppose we compare the percentage of Hawaii—35.73—with the corresponding percentage of New Jersey, which is 39.76.

$$SE(100p_2) = 100\left(\sqrt{\left(\frac{208{,}148 - 34{,}691}{208{,}148}\right)\left(\frac{(0.3976)(0.6024)}{34{,}690}\right)}\right)1.8$$

$$= 0.43$$

The standard error in New Jersey is much smaller compared to Hawaii, since New Jersey is a much larger state and consequently has a larger sample size. Thus,

$$t = \frac{35.73 - 39.76}{\sqrt{(1.06)^2 + (0.43)^2}}$$

$$= -3.52,$$

which is statistically significant at the 5 percent level of significance. Thus we reject the null hypothesis that the two proportions are identically equal to each other.

Additional detail on calculating standard errors for sample estimates derived from the 1990 Census can be found in Appendix C, *US Summary, Social, Economic, and Housing Characteristics*, Series 1990 CPH-5-1. Tables C-2 and C-3, mentioned earlier and appearing on the following page, were taken from that volume.

Table C-2. Unadjusted standard error for estimated totals

(Based on a 1-in-6 simple random sample)

Estimated Total[1]	Size of publication area[2]													
	500	1,000	2,500	5,000	10,000	25,000	50,000	100,000	250,000	500,000	1,000,000	5,000,000	10,000,000	25,000,000
50	16	16	16	16	16	16	16	16	16	16	16	16	16	16
100	20	21	22	22	22	22	22	22	22	22	22	22	22	22
250	25	30	35	35	35	35	35	35	35	35	35	35	35	35
500	-	35	45	45	50	50	50	50	50	50	50	50	50	50
1,000	-	-	55	65	65	70	70	70	70	70	70	70	70	70
2,500	-	-	-	80	95	110	110	110	110	110	110	110	110	110
5,000	-	-	-	-	110	140	150	150	160	160	160	160	160	160
10,000	-	-	-	-	-	170	200	210	220	220	220	220	220	220
15,000	-	-	-	-	-	170	230	250	270	270	270	270	270	270
25,000	-	-	-	-	-	-	250	310	340	350	350	350	350	350
75,000	-	-	-	-	-	-	-	310	510	570	590	610	610	610
100,000	-	-	-	-	-	-	-	-	550	630	670	700	700	710
250,000	-	-	-	-	-	-	-	-	-	790	970	1 090	1 100	1 100
500,000	-	-	-	-	-	-	-	-	-	-	1 120	1 500	1 540	1 570
1,00,000	-	-	-	-	-	-	-	-	-	-	-	2 000	2 120	2 190
5,000,000	-	-	-	-	-	-	-	-	-	-	-	-	3 540	4 470
10,000,000	-	-	-	-	-	-	-	-	-	-	-	-	-	5 480

[1]For estimated totals larger than 10,000,000, the standard error is somewhat larger than the table values. The formula given below should be used to calculate the standard error.

$$SE(\hat{y}) = \sqrt{5\hat{y}(1 - \frac{\hat{y}}{N})}$$

N = Size of Area
Y = Estimate of characteristic total

[2]The total count of persons in the area if the estimated total is a person characteristic, or the total count of housing units in the area if the estimated total is a housing unit characteristic.

Source: U.S. Bureau of the Census. *Summary, Social, Economic, and Housing Characteristics*, Appendix C. Series 1990 CPH-5-1.

Table C-3. Unadjusted standard error in percentage points for estimated percentage

(Based on a 1-in-6 simple random sample)

Estimated Percentage	Base of percentage[1]												
	500	750	1,000	1,500	2,500	5,000	7,500	10,000	25,000	50,000	100,000	250,000	500,000
2 or 98	1.4	1.1	1.0	0.8	0.6	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1
5 or 95	2.2	1.8	1.5	1.3	1.0	0.7	0.6	0.5	0.3	0.2	0.2	0.1	0.1
10 or 90	3.0	2.4	2.1	1.7	1.3	0.9	0.8	0.7	0.4	0.3	0.2	0.1	0.1
15 or 85	3.6	2.9	2.5	2.1	1.6	1.1	0.9	0.8	0.5	0.4	0.3	0.2	0.1
20 or 80	4.0	3.3	2.8	2.3	1.8	1.3	1.0	0.9	0.6	0.4	0.3	0.2	0.1
25 or 75	4.3	3.5	3.1	2.5	1.9	1.4	1.1	1.0	0.6	0.4	0.3	0.2	0.1
30 or 70	4.6	3.7	3.2	2.6	2.0	1.4	1.2	1.0	0.6	0.5	0.3	0.2	0.1
35 or 65	4.8	3.9	3.4	2.8	2.1	1.5	1.2	1.1	0.7	0.5	0.3	0.2	0.2
50	5.0	4.1	3.5	2.9	2.2	1.6	1.3	1.1	0.7	0.5	0.4	0.2	0.2

[1]For a percentage and/or base of percentage not shown in the table, the formula given below may be used to calculate the standard error. This table should only be used for proportions, that is, where the numerator is a subset of the denominator.

$$SE(\hat{p}) = \sqrt{\frac{5}{B}\hat{p}(100 - \hat{p})}$$

B = Base of estimated percentage
^p = Estimated percentage

Source: U.S. Bureau of the Census. *U.S. Summary, Social, Economic, and Housing Characteristics*, Appendix C. Series 1990 CPH-5-1.

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- Common Core of Data—The Common Core of Data (CCD) survey is conducted annually by NCES to acquire data about staff and students at the school, LEA (local education agency or school district), and state levels. Information about revenues and expenditures also is collected for a particular school year (July through June 30) via survey instruments sent to the states by October 15 of the subsequent school year. Since CCD is a universe survey, the data are not subject to sampling error. However, results are subject to nonsampling error from two sources—nonresponse and inaccurate reporting. Although virtually all of the states complete and return the CCD survey instruments, there are many delays in submitting data and submissions are sometimes incomplete. Further, misreporting can and does occur, reflecting varying interpretations of NCES definitions and differing recordkeeping systems.

Additional information on the Common Core of Data can be found in the appendix to *The Condition of Education 1995*, issued by NCES.

- 1990 Census of Governments Finance Data—Data on public school systems are obtained through a survey of all governmental units in the nation, conducted every five years (years ending in 3 and 8). Since all governmental units are included, the data are not subject to sampling error; some component of nonsampling error may be reflected, however, due to possible inaccuracies in classification, response, and processing.

Additional information on the collection of school finance data through the 1990 Census of Governments can be found in *Public Education Finances: 1989-90*, GF/90-10.

ISBN 0-16-048782-X

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Department of Education
Washington, DC 20208–5654

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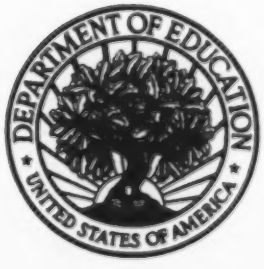
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